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DRAFT MEDIUM-TERM PLAN - 1992 - 1997

DRAFT MEDIUM-TERM PLAN - 1992-1997

SUBPROGRAMME 25: STATISTICAL DEVELOPMENT IN AFRICA

(a) Legislative authority

1. The legislative authority for this subprogramme is derived from the Lagos Plan of Action for the Economic Development of Africa 1980-2000 (A/S-11/14 annex), General Assembly resolution S-13/2 on the United Nations Programme of Action for African Economic Recovery and Development and the International Development Strategy for the fourth United Nations Development Decade.

(b) Objective

2. The objectives of this subprogramme are to assist African countries to strengthen and/or develop a durable infrastructure for the collection, processing, analysis and dissemination of integrated demographic, social and economic statistics, to integrate environment statistics into their routine data collection activities and to collect data on special population groups such as women, children, the disabled and the aged, to assist African countries to build up statistical data required for drawing up meaningful economic and social development plans, to develop the necessary statistical capabilities to produce and use on a continuous basis statistical data in planning, monitoring and evaluating social and economic progress, to provide continuous support for developing national data processing capabilities especially by enhancing the utilization of micro-computers, to expand the availability of and improve the ease of access to national, subregional and regional data bases, and to promote the improvement of the quality, relevance, timeliness and inter-country comparability of the data being collected.

(c) Problems addressed

3. Statistical development in Africa is still unsatisfactory despite some improvement in statistical organization and production over the last two decades. Few countries have well co-ordinated plans for statistical development and even fewer for national development plans which incorporate statistical development. There is a persistent lack of trained and experienced statisticians in many African countries. A number of statistical personnel has been trained, but the statistical brain drain, especially at management level, has continued. In spite of the advent of more efficient hardware and software, the time lag between the collection of data and the publication of results is still too long. The main reason for this is the lack of statisticians with modern data processing skills and of qualified data processing specialists as well as an insufficient level of co-ordination between such specialists and

computer personnel, particularly where large quantities of data need to be processed. Wider and more efficient micro-computer applications are looked for improving the timeliness and analytical quality of statistics.

4. The scope, quality and analysis of statistics in Africa hardly meet the elementary requirements of planning and decision-making. These deficiencies may translate into enormous costs if factors behind socio-economic and environmental crises remain unknown and thus unattended. Despite an improvement in demographic data collection Africa still lags behind the other regions in the availability of detailed and timely data regarding fertility, mortality and migration especially with respect to the determinants and effects or trends in these fields. While 20 African countries have enrolled in the African Household Survey Capability Programme, it is only fully operational in 12 countries. Data pertaining to environmental problems are almost non-existent in the countries of the region. Although some environmental assessments have been carried out, most countries lack co-ordination between data users and producers as well as data collection mechanisms. Many African countries do not as yet have basic statistics on agriculture, trade, industry, energy, transport, communications, and prices. National accounts have been compiled and processed for different periods of time for nearly all countries of the region, but the basic data for compiling the accounts are limited, inadequate and in most cases very general fixed parameter models have been used to evaluate quite different activities.

(d) Strategy for the period 1992-1997

(i) The situation at the end of 1991

5. The coverage, quality and timeliness of socio-economic and environment statistics in the region will have improved as compared to the early 1980s, but they will still not be sufficiently comprehensive and up-to-date to provide an adequate basis for decision-making, development planning, monitoring and evaluation. The use of statistical packages especially in the field of social sciences will have increased, though not very significantly.

6. Integrated survey programmes for the collection of basic data, in preference to ad-hoc enquiries, will have been implemented in about 14 countries. Further progress will have been made in building up national capabilities for collecting and compiling primary as well as derived data. Emphasis will also continue to be given to the establishment of new and the improvement of existing basic data series for incorporation into national accounts estimates.

7. For some countries, statistics on commodity products, energy and national accounts, will however, still lag behind and essential price data for the evaluation of economic conditions, the measurement of production trends and the assessment of information will be far from complete.

8. Almost all African countries will have established decennial population census programmes and many will be actively developing or strengthening programmes of continuing household surveys as well as initiating experimental programmes for the improvement of their civil registration and vital statistics systems. Review of national practices in demographic and socio-economic data collection, processing, analysis and application will have been carried out, recommendations made and programmes for filling data gaps will be in progress in a number of African countries. A number of countries in the region will have embarked on collecting environment statistics as part of their regular statistical activities, but conceptual, institutional and technical capabilities will need to be developed much further in order to supply adequate environmental information to planners.

9. The regional statistical data base will have been computerized and further developed. It will have been expanded to contain data on environment statistics, with particular emphasis on drought and desertification and on natural resources. However, the full development of this data base which has in the past been hampered by the financial crisis of the United Nations will depend on available resources and on the quantity and quality of data originating from national and subregional supporting centres. It is their growth which will therefore largely determine the scope and adequacy of the data base at the regional level.

10. The 15 statistical training centres participating in the Statistical Training Programme for Africa (STPA), will have trained approximately 700 professional and middle level statisticians a year. Some 20 trainers involved in middle-level/in-service training programmes will have been trained through workshops. In spite of this, the demand for trained statistical personnel will not have been satisfied. Post-graduate training will need to be further strengthened and research activities at the centres improved.

11. Studies will have been undertaken and recommendations made on national statistical data processing capability, statistical data base development and the use of software packages in statistical computing. However, these recommendations will not have been fully implemented. Countries will have acquired more micro-computers resulting in faster processing time, bigger storage capacity and lower costs. There will be an increased need to assist them in establishing national computer-based systems of integrated

economic, social, demographic and environment statistics and their analysis. A number of statistical publications on economic, social and demographic data collection, processing, analysis and application in African countries will have been prepared and disseminated.

12. These technical publications are intended to assist national governments in consolidating past achievements and thus ensure the durability of the data collection mechanisms which have been or are being established. Training activities (on-the-job training seminars, and workshops) and working groups aimed at developing conceptual and methodological skills of national statistical staff will have been organized. In order to further improve performance these efforts will, however, need to be intensified.

(ii) The period 1992-1997

13. The strategy to be adopted for the next medium-term plan is as follows:

(a) Assistance will be provided to member States for the maintenance and strengthening of their institutional framework and for the provision of data for integrated planning. Areas covered will include demographic, social and economic data, particularly on households and household members, as well as environment statistics;

(b) Advisory services will be provided to countries on the formulation of statistical plans including data production schedules, training programmes and detailed data processing requirements, on the establishment of user/producer committees for optimizing the use and relevance of statistical services, and on the development and maintenance of integrated computer-based systems of economic, social, demographic and environment statistics;

(c) Advisory services will also be provided on request to member States in the fields of population censuses, civil registration, household surveys, environment statistics, national accounts, trade statistics and industrial statistics. They will concentrate on building up self-reliance and will therefore emphasize on-the-job training;

(d) The existing regional statistical data base will be expanded with a view to disseminating to users comprehensive and up-to-date statistical information, including well-documented data from other international data banks and from national sources;

(e) A series of guidelines will be prepared, especially on the acquisition of computer facilities including micro-computers and their supporting software, on vertical and horizontal collaboration with respect to data processing among the different organizational units of the national statistical offices, on applications and analysis of data with particular relevance to the region and on the use of statistical information for monitoring the implementation of national development plans;

(f) Statistical computing materials for on-the-job training and formal training of statisticians at statistical training centres will be provided;

(g) Methodological studies will be carried out in specific areas of economic, social, demographic and environment statistics. These studies will have two main objectives, to identify and analyse the shortcomings of the basic statistics at the national level, and, to serve as technical guidelines for member States to assist them in their efforts to improve the quality and timeliness of data being collected;

(h) A series of seminars and training workshops will be conducted in order to examine conceptual and organizational requirements for improving national, subregional and regional programmes on socio-economic and environment statistics, to promote the exchange of experiences between the countries of the region in the field of statistics, and to develop further the professional competence of the participants. These workshops and seminars will focus on: statistical computing, population census, with particular reference to special population groups, civil registration systems and vital statistics collection, household surveys, environment statistics, international trade statistics, business surveys, basic economic statistics and national accounts. A series of technical documents will be prepared on the above topics, in order to provide member States with statistical methodologies suited to their needs.

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Agenda item 21

AN EVALUATION OF THE AGE-SEX DATA OF RECENT AFRICAN CENSUSES

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I. INTRODUCTION

1. This paper evaluates the age-sex data of recent population censuses conducted by member States of the Economic Commission for Africa. 1/ The censuses evaluated are mainly from the 1980 round (i.e.,1975-1984) of African population censuses.The two types of data that were utilized for the analyses from these censuses were the tabulated statistics on age for single and five-year age groups.

2. Age is a fundamental variable for the study of demographic and related socio-economic factors. Important uses of the age data include the classification and tabulation of demographic and related socio-economic variables as well as the preparation of population estimates and projections. Also, for the analyses of demographic and socio-economic characteristics, for example, pertaining to fertility, mortality and migration along with labour force participation, educational attainment, occupational status and income level, which vary with age, age can be employed as a "control" variable.

3. Despite the aforementioned and other uses of the age data the measurement of age in African population censuses and demographic surveys has been fraught with problems, with the result that the collected age data are affected by errors and deficiencies. The basic reason is that majority of the population are ignorant of their ages in exact numbers. Thus,the two major sources of errors and deficiencies in the age data include,(a) failure to report ages and (b) misstatements of ages that are reported.

4. A systematic pattern of age misstatements and coverage errors in African censuses have been delineated, including: (a) underreporting of women in their teens, (b) over-statement of the ages of adult females, and (c) underreporting of infants especially those under one year. 2/

5. Sex is another variable that is widely used for the classification and tabulation of demographic and related socio-economic variables. However unlike age, the question on sex in African censuses does not present definitional or classification problems. 3/ Nonetheless,partly due to the method and instruments of data collection employed in demographic inquiries, studies have identified selective coverage errors especially of female respondents, especially with respect to labour force participation information.

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1 For a previous similiar analysis see,ECA,"Comparative Analysis of Accuracy of Census Age distribution for Selected African Countries",African Population Studies Series no.2 (1975)

2 E. van de Walle, "Characteristics of African Data," in W. Brass et al The Demography of Tropical Africa (New Jersey: Princeton University Press ,1968), p.13

3 ECA,Study of Methods and Problems of the 1970 Round of African Population and Housing Censuses, E/CN.14/CAS. 10/5, Addis Ababa, Oct. 1977

6. The paper contains,apart from the introduction,the following sections. Section II presents and discusses the results of the evaluation of the accuracy of the single- and five-year age-sex data of recent African population censuses. Section III briefly reviews the methods for the adjustments of age errors,while Section IV presents a discussion on the various sources of age-sex errors in Africa population censuses. The final Section V, contains a summary and conclusions of the paper.

II. COMPARATIVE EVALUATION OF THE AGE-SEX DATA OF RECENT AFRICAN POPULATION CENSUSES

7. One method for the detection of errors in the age-sex data of censuses is by using two sets of records to compare individual reports on ages.The records could be acquired through reinterview surveys such as the post enumeration surveys (PESs) or other comparative data sources.The second method consists of comparing the reported age distribution with an expected age-sex configuration,for instance,stable or quasi-stable populations. The third approach involves subjecting the reported age distributions of various age cohorts to close scrutiny in order to detect irregularities.

8. In African settings there exists a number of problems in applying the first two methods. Firstly, comparable data systems such as PESs are few, and more important,have been found to be affected by similiar errors as the census. Also,the few published tabulations from this source have omitted crucial information which should throw light on the complex issues of age misreporting and selective coverage errors of African censuses. Secondly, the changing demographic parameters of African populations in recent years do not justify the utilization of stable or quasi-stable models.

9. Consequently,the analytical technique that will be mainly utilized are based on the third approach.

A. Evaluation of the Accuracy of the single-year age-sex data

10. For the evaluation of the single-year age data for the extent of digit preference or avoidance use is made of the Myers' Index. Essentially, by the Myers' Index, a "blended" population is estimated encompassing a weighted sum of the number of respondents in each of the ten terminal digits. It is assumed by this method that barring systematic irregularities in reported age distributions, the "blended" sum at each terminal digits ought to roughly equal to 10 per cent of the total "blended" population. Hence if the total at any digit is more than 10 per cent of the total "blended" population this points to overselection of ages in that digit (digit preference);and vice versa for underselection of ages (digit avoidance). The index of

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4 R.J. Myers, "Errors and bias in the Reporting of Ages in Census Data", Transactions of the Actuarial Society of America, 41,104 (October 1940)

preference is a summary measure of the extent of digit preference and/or avoidance in an age distribution. It is derived as one-half of the absolute sum of the deviations from 10 percent of each of the ten terminal digits. 5/

11. Table A.3 presents Myers indexes of preference for selected ECA member States, while Table 1 gives the relative ranking of the countries by these indexes for the 1980 round of censuses.

12. These two tables point to extensive digit preference/avoidance in the reported age distributions of the selected member States. This practice was more serious in the western African sub-region where countries like Gambia, Guinea-Bissau, Liberia and Niger recorded high indexes of preference for both males and females. The indexes of preference for the two countries of Southern Africa in the sample were low. Also, overall, the indexes for females were generally higher than those of males.

13. Table A.4 provides summary measures from the Myers index on the patterns of digit preference/avoidance for all terminal digits, 0,1,2,3...,9 in the age range 10-69 for selected ECA member States. Although a diversity of patterns emerge, however, general trends are also discernible. One is that the patterns of digit preference/avoidance mirror the trend indicated above by the indexes of preference. For example, digit preference/avoidance were relatively minimal in Congo, Mauritius, Rwanda, Sao-Tome and Principe, Swaziland and Tunisia, and extensive in Comoros, Gambia, Mauritania, and Niger.

14. Between these two sets of countries, that is, with minimal and very extensive terminal preference/avoidance, were the following: Burundi, Equatorial Guinea, Tanzania, Zambia, Ghana and Burkina Faso, where digit preference/avoidance occurred in limited digits especially 0.

15. With respect to the preference for certain terminal digits, the evidence shows that 0 and 5 were the preferred digits in the majority of countries (e.g., Botswana, Burundi, Burkina Faso, Comoros, Equatorial Guinea, Gambia, Ghana, Tanzania and Zambia). With respect to the avoidance of certain terminal digits, 1 was avoided in especially Comoros, Gambia, Niger and Tanzania; while 9 was avoided mainly in in Gambia, Niger and Ghana. On the other hand, in Sao Tome and Mauritius, countries whose data did not show particular preference/avoidance of digits, digit 0 was slightly avoided while 1 was slightly preferred.

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5. UN, Population Division "Accuracy tests for census age distributions tabulated in five-year and ten-year groups", Population Bulletin no 2, October 1952; and "The accuracy of quality of basic data for populatio estimates" in Methods of Appraisal of Quality of Basic data for Population Estimates, ST/SOA, Series A (Population Studies) no 23.

TABLE 1

RELATIVE RANKING BY MYERS INDEX OF PREFERENCE , SELECTED ECA MEMBER STATES 1980 ROUND OF CENSUSES

INDEX	MALE Country(year)(index)	FEMALE Country(year)(index)
1. Low under 10	Tunisia(84)(1.8)	Tunisia(84)(3.0)
	Sao Tome(81)(2.2)	Sao Tome(81)(1.9)
	Congo(84) (4.3)	Congo(84) (4.9)
	Equatorial Guinea(83)(6.8)	Mauritius(83)(1.1)
	Burundi(1979)(7.0)	Rwanda(78)(5.2)
	Kenya (1979)(6.4)	Kenya(1979)(8.1)
	Seychelles(77)(0.4)	Seychelles(77)(0.4)
	Zambia (80) (7.1)	Zambia (80)(7.5)
	Malawi(1977)(6.6)	Malawi(1977)(8.6)
	Botswana(81)(3.7)	Botswana(81)(3.8)
	Swaziland(86)(5.6)	Swaziland(86)(5.6)
3. Medium 10 to 19	Benin (79)(18.20)	Ghana(84)(17.0)
	Mauritania(77)(16.4)	Senegal (76)(11.2)
	Cameroon (76)(15.4)	Cameroon(1976)(19.2
	Central African Rep.(1975)(11.1)	Central African Rep.(1975)(15.8)
	Ghana(84)(14.0)	Burundi(1979)(11.0)
	Tanzania(78)(13.2)	Tanzania(78)(16.9)
3. High over 20	Gambia (83) (22.1)	Gambia (83)(25.9)
	Guinea Bissau(74)(20.0)	Guinea Bissau(22.6)
	Liberia(84)(20.0)	Liberia(84)(26.8)
		Mali(76)(25.2)
		Mauritania(77)(20.3
	Niger(77)(38.9)	Niger(77)(43.2)
	Comoros(80)(24.7)	Comoros(80)(26.5)

Source : Table A.3

B. Evaluation of the Accuracy of the five-year Age-Sex data

16. The analytical methods that are used to evaluate the five-year age and sex data are: the age ratio score, the sex ratio score and the United Nations joint age-sex accuracy index. 6/

17. The age ratio used here is the number of persons multiplied by 100 reporting the ages in a five-year age group to the arithmetic mean of the numbers below and immediately above the former five-year age group. If there has not been any violent fluctuations in births, deaths or migration, the two age groups should be roughly equal to 100. Another assumption for an expected age ratio of 100 is that errors of coverage are uniform from age to age and that net reporting errors converge to zero. Age ratios mainly estimate net age misreporting and not net census error.

18. The age ratio score, a summary measure of the accuracy of an age distribution, is estimated by adding the average deviations (without regard to sign) from 100 of the individual age ratios of all the ages. When this index is high, the census data on age is probably inadequate, and vice-versa when it is low, i.e. nearer to zero.

19. A typical pattern of the sex ratio is follows: beginning from about 105 at birth it declines slowly at younger and middle ages and faster at older ages. Due to the effects of cumulative decline in the sex ratio with age, the possibility for the mean differences between two sex ratios at adjacent ages to be zero especially at the older ages, is slim even for populations with smooth sex-age distributions.

20. The use of the sex ratio, (i.e., the number of males per 100 females) in the evaluation of the sex-age data of censuses is based on the following reasoning. Given that in recent years, the population has not been influenced by such factors as birth cycles, birth deficits, military casualities and large and discontinuous migrations, differences between the sex ratios for successive quinquennial age groups and deviations of quinquennial age ratios from one (or 100) would be slight up to age 70.

21. An overall measure of the accuracy of the sex distribution of census age data is the sex ratio score. This is the mean of the absolute successive differences of age-sex ratios. The lower the index, i.e., closer to zero, the more satisfactory the census data on sex would appear.

22. One important shortcoming of the sex ratio should be noted, that is, its inability to distinguish between deviations attributable to authentic age pattern sex ratio changes from that due to errors in the data and under- and over-enumeration.

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6 idem

23. The United Nations Joint age-sex accuracy index combines the sums of the (1) age ratio score (2) the sex ratio score and (3) three times the mean of the age-to-age differences in estimated sex ratios. The evaluation scheme of census age data by the UN index is as follows: under 20 -accurate; 20 to 40-inaccurate;above 40 -highly inaccurate.

24. Grouping of the age-sex data into quiquiennial groups should smoothen some of the irregularities identified above pertaining to the single year age data. However despite the aggregation,the grouped data display patterns of irregularities, which we shall examine in this sub-section,starting with the sex ratio.

1. Sex ratio

25. Table A.2 presents the sex ratios (number of males per 100 females) for quinquennial age groups and the total population for selected ECA member States for the periods 1970s and 1980s. An examination of the information indicate that there are a marked differences of total sex ratios between countries in the sub-Saharan Africa subregions (i.e.; West, Central and East/Southern) and in the North Africa sub-region. In the former, the sex-ratios were generally under 100, whilst in the latter they were all over 100.

26. Taking 95-105 as the usual range of the total sex ratio,the evidence also shows that they were unusually low in Benin (92),Burkina Faso (93) and Cape Verde (85) in West Africa; Burundi (94), Malawi(93), Mozambique (95), Botswana (89) and Lesotho (93) in East/Southern Africa; Central African Republic (92), Equatorial Guinea (92) in Central Africa; and high in Cote d'Ivoire (107) in West Africa; Djibouti (108) in East/Southern Africa; and Libya (106) in North Africa.

27. A number of countries in these two groups have over the years experienced either high emigration or immigration (for example, Burkina Faso, Cape Verde, Botswana, Lesotho, Swaziland, Djibouti and Libya), which largely explains their abnormal sex ratios.

28. The quinquennial sex ratios shown in Table A.2 display two main patterns of errors. Firstly, in the majority of countries the number of males vis-a-vis females increased from age group 0-4 to 10-14. This is especially the case for twelve out of the fourteen countries of West Africa (that is, barring Cape Verde and Gambia), twelve out of the sixteen countries of East/Southern Africa (that is, barring Botswana, Lesotho, Mauritius, Rwanda and Seychelles), three out of the five countries of Central Africa, and three out of the five countries of North Africa. These increases are pronounced in Benin, Cameroun, Central African Republic, Liberia, Niger, Sierra Leone, Sudan and Togo. Discounting migration which should be minimal for such age groups, the likelihood for misstatements of ages and/or underenumeration of females seem probable.

29. Secondly, with respect to the age groups 15-19 and 20-24, the numbers of females are excessive, in particular when compared with the age group 10-14: in Benin, Gambia, Liberia, Mali, Mauritania, Niger, Senegal and Sierra Leone in West Africa; Botswana, Burundi, Comoros, Madagascar, Malawi, Seychelles, Tanzania and Zimbabwe in East/Southern Africa; in Cameroon, Central African Republic, Congo and Equatorial Guinea in Central Africa and Sudan in North Africa. With respect to these cases the assignment of determinants should take into account migration as well as misstatements and/or upward allocation of females aged 10-14 to the age group 15-19.

30. To complement the above aggregate analysis, the sex ratios of following countries are next examined for systematic errors.

a.Libya (1982)

31. The total sex ratio was 106,which is slightly above the acceptable range.All seventeen age groups from 0-4 to 80 plus recorded excesses of males,which were pronounced i.e., above 105, for the age groups 40-44 to 55-59 as well as 10-24,65-69 and 75-79. Immigration mainly explains these excesses of males in particular for the working ages,15-64. However, even for some of these cases, and more so for the younger age groups, age misreporting as well as selective coverage of the sexes in the enumeration should also be taken into account.

b.Sudan (1984)

32. The total sex ratio of 102 falls within the acceptable range.However,a closer examination of the sex ratios by ages indicates some irregularities: beginning at 105 at age 0-4 it rises to 108 and 112 in the next successive quinquennial groups,5-9 and 10-14. The sex ratio drops suddenly from ages 15-19 up till 30-34. These violent fluctuations of the sex ratios are partly due to age misreporting and differential enumeration the two sexes. The same explanation apply to the very high excesses of males in the older age groups,40-69.

c.Benin (1979)

33. The overall sex ratio of 102 is well below the plausible range.Starting at 100 at 0-4, the excesses of males increase in ages 5-9 and especially 10-14,120. But from 15-19 marked excesses of females occur up to ages 60-64,barring 55-59. This erratic pattern of sex ratios should be explained mainly by age misreporting and selective under- and -overenumeration.

d.Niger (1977)

34. The total sex ratio of 98 which falls within the acceptable range,when considered alone, provides a misleading picture of the pattern of sex ratios in Niger.Beginning at 105, the sex ratio climbs to 110 and 122 in the age groups,5-9 and 10-14.It suddenly drops to 72,69,75 and 90 for the successive quinquennial age groups.The older age groups record even more implausible sex ratios, such as,159 and 173 for age groups, 45-49 and 55-59 respectively. These unrealistic sex ratios are undoubtedly the

result of age misreporting and selective under- or over-enumeration.

e.Cameroon (1976)

35. The total sex ratio of 96 lies slightly within the acceptable range. Specifically, the sex ratio starts at 101 rises slowly to 102 but very steeply to 10-14. From this level it drops suddenly from 116 to 95 at ages 15-19.This age group and the next six record excesses of females,very pronounced for ages 20-44.Some of these irregular patterns of the sex ratios are partly due to age misreporting and/or selective under-enumeration of either sexes.

36. The results of the evaluation of the sex ratios by the sex ratio score is now reviewed, with the review restricted to the 1980 round (i.e.,1975-1984) round of African censuses (Table 2).

37. By sub-regions, the sex ratio scores are lower in Southern, Central, and Northern Africa, compared with Western and Eastern Africa. For the three countries of Southern Africa, the sex ratio score was below 7, while it was below 10 for Central and Northern Africa. Sex ratio scores in Northern Africa were relatively low in Tunisia (4.39) and especially Algeria (3.45). Also in Central Africa, relatively lower scores were recorded by Cameroun (5.45), Congo (3.66) and Sao Tome and Principe (3.40).

38. In Eastern Africa, the sex ratio scores vary from 2.21 for Mauritius, one of the lowest for Africa, to 11.05 for Comoros.The other countries in this sub-region with relatively low sex ratio scores include: Burundi (5.04) Kenya (5.75), Madagascar (4.92) and Rwanda (4.36).

39. Undoubtedly, the poorest data on sex distribution in ECA member States according to the sex ratio score were from Western Africa, where the scores vary from 5.71 for Ghana to 27.24 for Niger, the highest for all selected ECA member States. Other countries in the sub-region that recorded high sex ratio scores were Gambia (14.25) Guinea-Bissau (14.86) and Mali (12.42).

2. Age Ratio

40. Table A.1 presents the age ratios for quinquennial age groups separately for males and females for selected ECA member States for the periods 1970s and 1980s.

41. The data for various countries display the following patterns. Firstly, for most of them, that is, barring Algeria, Cape Verde, Egypt, Equatorial Guinea and Senegal, an age ratio in excess of 100 is recorded for the age group 5-9. Secondly, similar patterns of age ratios are discernible for males and females, that is, an excess of 100 or vice-versa in one sex is usually replicated in the other. Thirdly, a majority of the countries recorded age ratios under 100.

42. Apart from these patterns, the age ratios fluctuate from age to age and country to country.

43. The evidence shows that the age ratio score were generally lower for males compared with females. Also, apart from the Southern African Sub-region, where the scores for the three countries, vary from 3.09 to 8.97 for males and 4.74 to 8.85 for females, the scores were high in most countries in the other sub-regions. In Eastern Africa the age ratio scores vary from 3.54 to 26.51 for males and 3.92 to 31.12 for females; in Central Africa, from 3.15 to 18.92 for males, and 3.79 to 25.92 for females; in North Africa from 5.14 to 17.70 for males, 5.92 to 20.64 for females; and West Africa, the sub-region with the highest scores, from 5.64 to 28.58 for males, and 10.21 to 48.34 for females.

44. To complement the above aggregate analysis, the age ratios of six countries are next analysed for systematic patterns of errors.

a. Algeria (1977)

45. The age ratios of Algeria for males and females recorded troughs (i.e., deficits of 100) in the age groups, 5-9, 15-19, 30-34, 50-54 and 60-64, and excesses of 100 in the remaining age groups. The ratios fluctuate erratically especially at the beginning and ending age groups.

46. More specifically, taking an absolute deviation from 100 of 2 per cent as normal, 5 out of the 13 quinquennial age classes for males and 3 for females fall within this range. Also, the age ratio scores are : 5.80 for males and 5.92 for females, among the best for North Africa.

b. Botswana (1981)

47. The age ratios for Botswana is relatively free from pronounced fluctuations compared with other African countries. For example, if we take an absolute deviation from 100 of 2 per cent as normal, 7 out of the thirteen quinquennial age groups for males and 5 for females fall within the range. All the same the following age groups display marked excesses or deficits of 100 for both sexes : 15-19, 20-24, 30-34, 35-39 and 50-54, part of whose explanation is out-migration and part missreporting. The age ratio scores are : 3.09 for males, and 5.75 for females.

c. Liberia (1984)

48. The age ratios of Liberia for both males and females have excesses of 100 within the same age groups: 5-9, 15-19, 25-29, 35-39, 45-49, 50-54 and 60-64. Alternatively there were troughs for the remaining age groups identical for both sexes: 10-14, 20-24, 30-34, 40-44, 55-59, and 65-69.

49. The excesses and deficits of 100 were more marked for females than males. Also, the age ratios for both males and females display erratic fluctuations especially at the beginning and ending age classes. Taking an absolute deviation from 100 of 2 per cent as normal only 3 of the 13 quinquennial age groups for

males and 1 for females fall within this range. The age ratio scores are: 7.24 for males and 10.35 for females.

50. To conclude, the quinquennial age ratios for selected ECA member States examined globally and individually above display pronounced fluctuations characterised by sharp peaks (i.e. excess of 100) followed by troughs (deficit of 100). These deviations of the age ratio were generally steeper at the beginning and ending age groups. While some of the deviations could be attributed to migration and mortality, misstatements of ages, selective under-reporting of certain sexes and age groups and digit preference were the more important determinants.

C. Overall evaluation of the age-sex data

51. For the overall evaluation of the age-sex data of selected ECA member States for the 1970s and 1980s, the joint score index is employed (table 2). To recall, the scale of evaluation by this index is as follows: accurate: under 20; inaccurate: 20 to 40; and highly inaccurate: above 40.

52. On the whole, according to the joint score index, the age-sex distributions of the selected ECA member States were highly inaccurate, with the situation pronounced in the Western and Eastern African sub-regions compared with the Northern, Central and especially the Southern sub-regions. At the country level, the scores vary from 17.92 in Congo to 158 in Niger.

53. Only the age-sex data from the Congo could be described as accurate, that is, under 20. However, the following additional countries with scores under 26 barely fall outside this range: Kenya, Madagascar and Mauritius in Eastern Africa; Sao Tome and Principe in Central Africa; Algeria and Tunisia in North Africa; and Botswana in Southern Africa. No country in West Africa qualified.

54. Also, among the remaining countries, the following fall within the inaccurate range,that is, with scores between 27 and 40 : Burundi, Seychelles and Zambia in Eastern Africa; Cameroun in Central Africa ; Libya in North Africa ; Ghana, Liberia and Senegal in West Africa and Lesotho and Swaziland in Southern Africa.

55. In the rest of the remaining countries, that is, those not mentioned above, the age-sex distributions are very high. The numbers are about evenly distributed among sub-regions, with the exception of the Southern African sub-region which had none.

D. Trends in the Accuracy of the Age-Sex Data of African Censuses conducted in the 1960s,1970s and 1980s

56. Over the years some improvements have taken place in the reporting of the age-sex data of successive African population censuses conducted in the 1960s,1970s and 1980s.This is evident by an examination of the joint-scores and Myers indexes of more recent and those of earlier censuses of the following countries with information: Algeria,Botswana,Ghana,Kenya,Liberia,Morocco, Sierra Leone,Tanzania,Tunisia and Zambia (tables A.3 and A.5).

TABLE 2

Age ratio, sex ratio score and joint index score for Selected African Countries a /

Country/ sub-region	Age ratio score male	Age ratio score female	sex ratio score	Joint score index
Eastern Africa				
Burundi/1979	7.73	10.91	5.04	33.77
Comoros/1980	26.51	31.12	11.05	90.78
Djibouti/1983	17.65	22.49	9.73	69.34
Kenya/1979	4.45	3.92	5.75	25.61
Madagascar/1975	3.54	5.35	4.92	23.64
Malawi/1977	14.09	8.56	8.48	48.09
Mauritius/1983	9.00	8.56	2.21	24.20
Mozambique/1980	11.79	13.46	7.51	47.77
Rwanda/1978	6.58	6.25	4.36	25.90
Seychelles/1977	5.05	9.33	7.97	38.35
Tanzania/1978	10.07	9.12	9.08	46.42
Uganda/1969	9.35	13.56	9.49	51.37
Zambia/1969	17.04	9.07	15.00	72.01
/ 1980	5.14	9.87	7.70	38.12
Central Africa				
Cameroun/1976	6.96	6.43	3.49	31.13
Central African Rep. /1975	18.92	25.92	9.37	72.96
Congo/1984	3.15	3.79	3.66	17.92
Equatorial Guinea/1983	12.90	19.74	11.30	66.54
Sao Tome and Principe/1981	6.74	5.92	3.40	22.87
Northern Africa				
Algeria/1977	5.80	5.92	3.45	22.08
Egypt/ 1976	12.58	15.70	9.68	57.33
Libya/1973	5.42	11.26	6.77	36.98
Morocco/1971	15.6	26.9	17.1	93.8
/ 1982	10.72	17.98	9.65	57.66
Sudan/1973	17.70	20.64	9.19	65.90
Tunisia/1984	5.14	6.32	4.39	24.64
South Africa				
Botswana/1971	6.1	6.4	6.2	31.3
/ 1981	3.09	5.75	5.58	25.58
Lesotho/1976	8.97	8.85	5.27	33.64
Swaziland/1986	6.22	4.74	6.98	31.90

(Contd.)

Country/ Subregion	Age ratio score male	Age ratio score female	sex ratio score	Joint Score Index
Western Africa				
Benin/1979	12.26	14.90	10.84	59.69
Burkina Faso/1975	11.61	15.90	10.14	57.93
Cape Verde/1980	14.87	12.74	6.14	46.04
Cote d'Ivoire/1975	6.72	10.21	9.89	46.60
Gambia/1983	16.33	26.25	14.25	85.32
Ghana/1960	15.0	20.6	9.6	63.8
/ 1970	10.2	12.0	7.2	42.7
/ 1984	9.67	10.89	5.71	37.68
Guinea Bissau/1979	14.05	20.08	14.56	78.71
Liberia/1984	7.24	10.35	7.27	39.41
Mali/1976	10.83	20.90	12.42	68.98
Mauritania/1977	11.34	15.10	6.37	45.55
Niger/1977	28.58	48.34	27.24	158.63
Nigeria/1963	30.46	37.70	14.06	110.35
Senegal/1976	5.64	10.03	7.49	38.11
Sierra Leone/1963	12.0	15.2	14.6	70.7
/ 1974	13.50	16.07	8.46	54.95
Togo/1981	14.03	13.16	8.72	53.35

57. For instance,the joint score index of Algeria came down from a level of 74 in the 1954 census to 22 in the 1977 census.Also Botswana,one of the African countries with fairly accurate age-sex data, recorded the following declining joint score indexes: 39,31,and 26 in the 1964,1971 and 1981 population censuses.In addition the Myers indexes for both sexes declined from 5.1 in 1971 to 3.7 in 1981.

58. Similarly in Ghana,which has a relatively long census experience,the joint score index declined in each succesive population censuses: from 53 in 1960 to 38 in 1984.(It should be pointed out,however,that the score for 1984 is fairly high).The Myers index for both sexes also declined from 30 in 1960 to 16 in 1984.

59. Another African country with serious distortions in its age-sex data that experienced improvements over successive censuses is Sierra Leone: the joint score decreased from 71 in 1963 to 55 in 1974,although the latter index is still relatively high.

E.Differential Accuracy of the Census Age-Sex Data

60. One important differential in the accuracy of the reporting of the age-sex data,identified above, is that between males and females. According to the available evidence the reported and recorded ages of males in African population censuses are more accurate compared with those for females.

61. In Tunisia,for example,the Myers index of preference for males calculated from the 1984 population census was 1.8 compared with 3 for females. In Liberia, the Myers index of preference for males in the 1984 census was 20 compared with 27 for females (table A.3).

62. Another important differential in the reported and recorded age-sex data is that between urban and rural areas. Table A.5 contain a summary of information on this topic. The evidence indicate that ages were better reported in urban compared with rural areas. For instance, the Myers index of preference for the urban areas of Benin during the 1979 population census was 16 vis-a-vis 22 for the rural areas.

63. A study of this differential with respect to the Liberian 1974 population census noted: "Urban areas consistently had better age records and reporting than rural areas, just as female age reporting was consistently inferior to that of males..."7/

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7. P.O.Ohadike,"Determinants of Quality of Age Data: A Case Study of The Liberian 1974 Census",RIPS Working Papers,RIPS/WPS/2/87

In one of the rare studies on the determinants of spatial and socio-economic differentials of African population census age-sex data, a positive correlation between the level of socio-economic development (defined in terms of variables such as literacy and white-collar job) and the quality of age reporting and recording was established .8/

64. In another study, adult literacy was found to exert a significant negative influence on the Myers index of preference: "disparities in the level of illiteracy between men and women and among sub-regions [were] the main reason for the observed differentials in the indexes of preference".9/

III. ADJUSTMENTS FOR ERRORS OF THE AGE-SEX DATA

65. Adjustments of the age-sex data for errors are made easier by the availability of other comparable good quality data, which could be used as the standard against which the former could be evaluated. Given the incompleteness of alternative data sources in a number of African countries, adjustments of such data is relatively limited.

66. The results of post enumeration surveys (PESs) have been shown as one of the sources for adjusting population census data by the identification and quantification of mainly coverage errors. In this connection the PES of the Liberian 1974 population census, based on the dual record system is used to illustrate this approach.10/ It has been established that the adjusted male age data corrected from information from the PES provided an age-sex structure as well as vital rates derived from it, which were closer to a stable population age-sex structure and vital rates derived from it.11/

67. Moreover, the tabulated estimated age-sex completeness from the PES, gave some evidence about errors e.g., the more complete coverage of females aged 15 to 44 compared with those under 10 and over 45; declining completeness of coverage for males and females 15 to 19 years as well as improvement for males up to ages 60, and for females up to age 45. This sort of information could be used for corection of the data.

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8. idem

9. Mohamed Bailey, "Patterns of Digit Preference and Avoidance in the Age Statistics of Some Recent African Censuses: 1970-1982", unpublished manuscript

10. Economic Commission for Africa/Regional Institute for Population Studies, Workbook on Demographic Data Evaluation and Analysis. RAF/87/P03 (Addis Ababa: 1989

11. E.S. Mark and John C. Rumford, "The 1974 Post-Enumeration Survey of Liberia-A New Approach", in K. Kroti (ed.) Development in Dual System Estimation of Population Size and Growth. (Edmonton: The University of Alberta Press, 1978)

68. Another piece of data that could be used for adjustment of defective age data is historical uncorrected tabulated age-sex data. A large data set of this information,stratified, for example, by various major regions,could provide insight about peculiar but common patterns of age distortions,which could be used as a basis for adjustment.12/

69. Also,stable/quasi-stable models could be used for the correction of defective age-sex data,for countries where their conditions are approximately satisfied.This is made possible by the development of "some standard patterns of age misreporting and relative underenumeration...." 13/ This approach was utilized to adjust the population over 35 from the 1970 population census of Ghana and the adjusted age-sex distribution used to estimate vital rates.

70. Mathematical techniques,e.g.,the Carrier-Farrag ratio method, quadratic and osculatory interpolations-have also been employed to generate 5-year age groups that have been adjusted for net reporting errors. The principal criticism of this approach centres on the mechanical nature of the adjustment,resulting,in some cases,in the disregard of irregular pecularities of the age-sex distributions.

IV. SOURCES OF AGE-SEX ERRORS IN AFRICAN POPULATION CENSUSES

71. To provide the background to the discussion on the recommendations of this paper on strategies to enhance the quality of the age-sex data of African population censuses, this section briefly reviews the sources of age-sex errors. The following four topics will be highlighted, namely: (a) ignorance of ages on the part of the respondents (b) imputation of unknown ages by enumerators (c) data collection procedures, and (d) uses of guidelines such as the historical calendar. At the outset, it has to be pointed out that there is limited information from African censuses on most of these issues.

72. One of the basic reasons behind age misreporting in population censuses of African countries is due to the fact that a large number of respondents, because of illiteracy and/or lack of knowledge of ages in calendar terms,are ignorant of their ages in exact numbers. In these circumstances, studies have found out that the ages of a substantial number of respondents are provided by enumerators and other third parties such as the heads of household, whose estimates of ages have been observed to be flawed. A methodological analysis of the age data of the Sierra Leone 1963 population census by Gilbert,for instance, estimated that roughly half of the reported ages, 20-24 and above, and one-third of the total ages were provided by enumerators and other third parties such as heads of households. 14/

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12. ECA,"Attempt at Adjustment of Severely Inaccurate Age Distribution Countries of Tropical Africa",African Population Studies Series,no.2,1975
13. Ewbank op.cit
14. M.A. Gilbert, The Sierra Leone Census of Population of 1963, Central Statistics Office, Freetown, 1963, unpublished manuscript

73. On misreporting of ages imputed by enumerators, Gibril in a study involving comparison of ages stated in transcripts of tape recordings of the Gambian 1973 census interviews with the ages recorded by enumerators on the questionnaires detected that they (the enumerators) either over- or under-stated one-quarter of their reported ages of respondents.15/

74. In the estimation of ages in African countries resort has also been made to a number of guidelines such as the historical calendar, identification cards and similiar records along with physical appearance, which have introduced errors in the age data.

75. The historical calendar, that is, a list of local and/or national events, has been experimented with in e.g., the 1963 census of Sierra Leone, the 1960 census of Ghana, and the 1967 census of Tanzania. Their usefulness, however, in reducing age misreporting errors has been debated.

76. In some African countries, for example, Ghana(1960) and Tanzania (1967) that experimented with the historical calendars, their usefulness was greatly reduced by their exclusion of local events, which the majority of illiterate rural populations more easily relate to. Even with national events, studies have found out that some population groups, especially in rural areas were not familiar with them.

77. Moreover, it has been observed that the African countries that experimented with them in their past population censuses did not invest enough time and care in their preparations and uses.

78. These and other problems of the historical calendars have called into question their usefulness in reducing age misreporting in African and other censuses:

> Efforts to improve age reporting in surveys through the use of local calendars of historical events are probably a waste of time and money [except] for estimating the ages of children under age 10. The evidence... suggests that these calendars are rarely used properly in large surveys and censuses and that when they are used they are apt to lead to biased estimates of ages for adults.16/

80. A related method for the estimation of ages is that based on information on identification cards and similar records which confer benefits on individuals. Use has been made of these documents in the Senegal 1976 and Libyan 1964 censuses. Apart from errors that crop up by the rough calculation of the enumerators, the authencity of information on such records are usually suspect. A review of the Senegalese experienced noted that "the information on the identification records in many cases were inaccurate, [and] such inaccuracies were also reflected in the age data collected".17/

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15. M.A.Gibril,Evaluating Census Response Errors: A Case Study of the Gambia.Paris: OECD,1979
16. Ewbank, op.cit.
17. ECA,"A Study of Methods...",op.cit.

81. Estimates of ages in African population census have also been based on physical appearance and/or biological relationships, such as, the weaning of a child or his first walking and a guessed age at marriage. Analysts have reported that this sort of information distorts the reported age distributions. For example, it results in understatement of the ages of unmarried and overstatement of the ages of married 15 to 19 year-old females. In this context, Gibril's study of the Gambian 1973 census, mentioned above, for instance, indicated that enumerators were prone to misreporting the ages of women over 20 because they utilized information on their parity when estimating ages.

82. Another source of error in the age data of African demographic inquiries is related to the type of questions on age included, e.g.: (a) age in completed years or months, (b) date of birth and (c) date of birth and completed years or months.

83. The use of each of these questions have advantages and disadvantages.18/ With respect to the question on only completed years/months, this may be the only feasible method in countries such as in Africa where the overwhelming majority of the population do not know their ages. Of course the estimated ages so derived will be affected by errors of misreporting. The compromise questions whereby those respondents who know their dates of birth are given the option to provide this information and those that do not have their ages estimated, has the advantages that it takes cognizance of the fact that a growing number of persons in many African countries especially the younger generation, know their dates of birth. That this more refined information on age should be collected, along with the crude estimates, has much to recommend it.

84. The third approach, the provision of the age data only be means of data of birth, ought to provide a richer source of data for countries, such as Mauritius, where the registration of birth is almost universe. However, in other countries, where this condition is not satisfied, the adoption of this method would not improve the method based on estimates from completed years. Also, certain digits, especially multiples of 10 e.g. 0 and 5, are usually over-represented in answers to this question. This was the case in the 1969 population census of Zambia, where ages ending in 0 and 4 were over-represented. Moreover, since a large number of the population, especially among the older generations, are ignorant of their births, "not stated", cases were usually high, for example in the 1974 census of Zambia.

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18. idem.

IV. SUMMARY AND CONCLUSIONS

85. This paper has attempted an evaluation of the age-sex data of recent African population censuses, mainly those conducted during the 1980 round. Its major findings could be summarized as follows, that: (a) the age-sex distributions of the selected ECA member States were, on the whole inaccurate, with the situation pronounced in the Western and Eastern sub-regions compared with the North, Central and South; (b) over the years, some improvements have taken place in the reporting of the age-sex data of successive African censuses, that is,those conducted in the 1960s, 1970s and 1980s, although in a number despite these improvements, the recent reported ages are still highly inaccurate; (c) the reported and recorded ages of males were more accurate than those of females and (d) ages were better reported in urban than rural areas.

86. With respect to sources of errors in the reported age-sex data of current African population censuses, the analysis revealed that they were attributable to a number of of factors, such as, ignorance of ages on the part of respondents because of illiteracy and/or lack of knowledge of ages in calendar terms; imputation of unknown ages by enumerators and other third parties; data collection procedures especially the types of questions on age included on census questionnaires, and assignment of unknown ages by using guidelines such as the historical calendar.

87. On the basis of the findings of this paper, the following recommendations are put forward aimed at improving the quality of the age data in future African population censuses, namely:-

a. An evaluation has to be made by census statisticians - in, for example, pre census tests of the questionnaires - about the most suitable questions on age to be included. This review should take into account social and cultural factors of the country that have some bearing on knowledge about age, and also the fact that a growing number of the population - the young - know their current ages.

b. Since coverage errors contribute to distorted age reporting in African censuses, an effort should be made to minimize their occurrence, by for instance, the performance of meticulous cartographic work and complete enumeration of persons usually prone to be missed, such as infants, servants and person not in definable households.

c. To enhance our current knowledge about age misreporting and age selective under- and over-enumeration to facilitate the institution of appropriate corrective measures, census statisticians should provide tabulations from information obtained in re-interview surveys such as the PES, on the types of errors by various population sub-groups e.g. by marital and economic status along with parity. Also, more research to throw light on the interview process should be conducted.

d. Finally, is the recommendation on the careful selection and training of the field staff, especially enumerators. The saliency of this proposal for African countries is attested by experienced demographers who have worked in less developed countries. Thus,according to one,"the allocation of additional resources in terms of interviewers and supervisors can have substantial effects on age reporting even in countries with high illiteracy levels".19/An important advantage of this recommendation is that it can be easily implemented by African countries that still have to conduct censuses in the 1990 round.

19. W.Seltzer,Demographic Data Collection,An Occasional Paper, Population Council,1973,p.10

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TABLE A.1: AGE RATIO IN FIVE-YEAR AGE GROUPS, SELECTED ECA MEMBER STATES

Western Africa - Age Ratios 1970s and 1980s

	Benin 1979		Burkina Faso 1975		Cape Verde 1980		Cote d'Ivoire 1975	
Age-Group	M	F	M	F	M	F	M	F
5-9	117.4	114.6	114.3	114.3	89.0	87.1	109.0	110.2
10-14	83.7	70.9	91.5	84.7	108.6	108.4	86.0	75.1
15-19	84.6	96.3	104.7	100.4	118.4	108.7	89.8	106.0
20-24	88.4	111.6	80.8	89.3	89.8	102.2	103.5	96.1
25-29	114.6	119.3	107.8	116.3	79.2	94.4	109.4	114.2
30-34	97.4	87.1	94.6	95.7	68.5	65.7	92.0	91.9
35-39	105.9	103.0	102.8	95.1	78.7	85.2	103.2	102.9
40-44	89.7	90.6	97.6	105.3	117.9	125.6	97.8	93.7
45-49	104.4	100.9	95.2	87.3	104.8	101.6	101.6	97.1
50-54	104.2	107.1	112.0	121.1	117.6	113.4	95.3	101.0
55-59	82.3	75.0	86.1	73.1	76.4	72.7	96.9	83.9
60-64	119.9	131.5	124.4	138.2	100.2	102.4	101.1	113.4
65-69	86.0	80.8	69.2	63.8	107.5	106.6	82.6	77.2

	Gambia 1983		Niger 1977		Mauritania 1977	
Age Group	M	F	M	F	M	F
5-9	116.8	119.2	111.3	108.9	118.9	118.9
10-14	88.2	78.8	80.8	61.4	89.5	81.2
15-19	90.9	101.1	104.5	135.6	100.8	103.8
20-24	95.1	93.1	87.0	92.5	97.2	98.5
25-29	115.5	119.5	102.4	105.6	95.5	96.9
30-34	95.5	97.7	111.4	112.3	94.6	100.0
35-39	94.5	83.3	87.4	69.3	88.0	85.5
40-44	106.0	117.7	125.6	146.3	123.9	136.7
45-49	89.2	73.7	66.7	50.0	86.0	79.5
50-54	119.1	142.9	153.9	202.1	111.4	117.7
55-59	69.5	54.9	55.1	38.7	95.4	89.8
60-64	145.9	179.3	128.4	265.0	106.8	115.7
65-69	69.2	57.0	48.2	35.4	68.2	60.2

Age Group	Ghana 1984		Guinea Bissau 1979		Liberia 1984		Mali 1976	
	M	F	M	F	M	F	M	F
5-9	113.2	113.5	110.3	114.2	104.9	106.8	105.9	106.0
10-14	94.0	91.1	92.7	74.9	95.1	83.0	85.6	78.9
15-19	101.1	93.8	99.1	105.3	102.0	109.6	110.0	113.5
20-24	90.4	102.0	81.9	91.8	93.8	100.3	85.9	88.5
25-29	103.8	106.2	119.5	129.7	107.5	105.2	99.0	108.6
30-34	98.2	96.2	82.9	79.6	90.6	87.7	102.8	104.4
35-39	97.7	94.6	114.6	109.6	101.1	110.5	99.3	88.8
40-44	90.5	96.4	88.8	95.7	94.9	87.3	102.3	111.8
45-49	108.8	98.9	107.8	93.4	103.1	98.9	91.2	78.3
50-54	106.8	113.2	97.2	116.0	100.8	106.9	110.8	128.4
55-59	76.2	71.3	81.2	65.1	80.6	75.3	85.6	68.0
60-64	121.3	130.6	136.3	153.3	125.1	126.5	130.8	163.3
65-69	82.2	81.7	82.0	66.6	95.5	99.2	74.2	61.8

Age ratio:North Africa

Age Group	Senegal 1976		S/Leone 1974		Togo 1981		Tunisia 1984	
	M	F	M	F	M	F	M	F
5-9	98.0	96.2	119.2	122.3	116.8	117.0	101.7	101.8
10-14	89.8	85.3	84.6	69.7	86.1	76.0	94.8	94.2
15-19	103.9	109.1	96.4	112.7	107.7	101.5	106.5	107.1
20-24	97.4	96.2	85.1	87.9	77.3	93.3	101.6	100.4
25-29	102.6	106.7	120.5	119.1	113.3	120.2	97.6	100.6
30-34	88.2	91.1	91.0	94.5	87.2	87.5	100.6	96.8
35-39	102.7	100.6	108.2	103.5	107.1	105.9	84.2	89.1
40-44	99.6	104.0	93.1	94.5	86.1	86.3	94.4	94.5
45-49	102.6	93.1	104.0	96.5	119.6	109.6	105.1	107.8
50-54	96.6	104.4	103.8	106.6	95.0	98.2	107.9	106.3
55-59	98.4	85.3	78.5	71.9	80.1	77.3	96.0	92.8
60-64	110.5	123.4	169.4	159.6	117.3	120.2	102.8	107.3
65-69	81.0	70.5	81.1	80.6	87.9	86.8	92.0	81.8

Northern Africa : Age-Ratio

Age Group	Algeria 1977		Egypt 1976		Libya 1973		Morocco 1982		Sudan 1973	
	M	F	M	F	M	F	M	F	M	F
5-9	98.4	98.7	82.8	93.8	104.9	107.8	102.9	103.1	123.3	123.1
10-14	102.3	101.2	121.0	113.1	100.3	96.2	102.1	97.7	87.6	81.8
15-19	94.8	93.8	104.4	95.2	85.3	84.3	94.8	100.5	94.5	95.6
20-24	100.5	105.3	87.9	97.2	94.2	92.6	105.7	105.0	79.3	85.0
25-29	103.2	97.2	103.3	102.7	100.0	107.9	100.7	97.4	122.2	131.8
30-34	78.2	82.4	88.3	93.3	91.4	84.5	95.6	95.6	85.0	84.7
35-39	101.8	105.8	103.9	101.0	106.9	118.1	82.4	83.7	123.4	114.7
40-44	106.2	103.7	103.2	107.1	98.8	91.0	106.0	119.7	90.5	91.9
45-49	100.4	102.2	95.4	87.4	107.6	108.2	95.8	85.0	98.4	89.6
50-54	93.8	90.1	113.1	129.0	93.8	96.2	114.5	129.1	108.8	118.1
55-59	103.3	103.9	80.4	66.9	90.3	82.5	82.0	68.8	68.7	62.3
60-64	91.0	94.4	128.0	149.8	101.3	115.9	131.1	157.2	138.6	151.0
65-69	113.8	111.3	78.5	66.8	96.9	84.1	73.9	52.3	-	-

Middle Africa Age Ratio

Age Group	Cameroon 1976		C A R 1975		Congo 1984		Eq.Guinea 1983		Sao Tome /Principe 1981	
	M	F	M	F	M	F	M	F	M	F
5-9	105.1	108.3	109.7	109.2	101.0	100.9	89.6	90.7	91.1	90.2
10-14	96.3	85.7	99.1	85.5	99.2	97.9	105.4	99.9	97.8	96.2
15-19	99.2	104.2	100.8	113.8	99.9	102.4	107.9	107.9	104.6	106.6
20-24	90.7	95.2	77.9	77.9	99.3	98.7	88.3	97.4	99.6	98.6
25-29	100.7	102.9	111.2	123.8	99.9	99.7	92.2	93.1	93.6	96.4
30-34	91.1	93.8	85.4	76.4	90.8	93.1	101.8	95.9	86.4	87.8
35-39	109.7	108.5	120.2	134.5	98.4	99.7	89.1	96.7	80.9	88.0
40-44	95.9	96.4	83.6	78.2	92.1	87.0	107.1	113.3	118.0	109.0
45-49	108.3	99.7	129.0	134.7	110.1	109.3	103.9	88.2	102.9	100.1
50-54	99.0	100.8	76.9	76.0	92.3	77.5	[illegible]	[illegible]	98.4	102.0
55-59	94.3	89.7	144.4	145.5	100.1	99.1	74.6	56.0	104.7	105.1
60-64	113.5	117.5	65.5	58.3	97.7	106.5	130.0	181.0	95.5	95.1
65-69	76.6	71.9	-	-	103.5	95.4	67.7	57.9	99.3	93.6

Eastern and Southern Africa : Age Ratio

Age Group	Burundi 1979		Comoros 1980		Djibouti 1983		Kenya 1979		Madagascar 1975	
	M	F	M	F	M	F	M	F	M	F
5-9	94.4	94.7	117.6	120.6	109.0	110.3	100.9	101.8	99.2	98.4
10-14	91.0	89.1	101.8	90.5	96.9	93.7	100.0	96.0	95.4	90.5
15-19	109.9	109.9	88.2	95.6	104.2	109.4	100.9	103.8	102.9	108.3
20-24	105.3	108.0	92.8	97.0	106.8	101.1	93.7	96.0	99.9	97.2
25-29	94.6	93.3	93.6	100.4	99.0	97.7	98.3	98.5	94.5	100.1
30-34	90.5	92.1	105.1	99.9	92.5	100.3	100.8	95.2	84.2	84.9
35-39	93.9	93.7	87.0	89.9	84.1	88.1	87.0	94.8	107.3	109.3
40-44	96.9	105.7	129.9	126.9	129.1	123.6	102.7	100.0	99.4	96.6
45-49	105.2	94.7	73.4	64.4	78.2	70.3	98.5	95.5	99.8	102.8
50-54	99.1	109.7	143.7	169.0	124.7	141.8	101.7	107.2	102.2	98.4
55-59	86.9	79.2	55.6	47.9	70.0	58.1	96.9	89.5	102.6	98.9
60-64	116.9	129.7	189.2	217.2	137.1	167.0	89.5	100.6	99.0	103.2
65-69	89.4	85.3	52.9	44.3	60.7	53.2	114.8	96.7	97.6	89.2

Age group	Malawi 1977		Mauritius 1983		Zambia 1980		Zimbabwe 1982	
	M	F	M	F	M	F	M	F
5-9	99.4	100.6	100.6	101.4	110.2	109.9	104.5	104.6
10-14	87.8	79.5	87.6	86.5	99.0	96.0	105.6	100.5
15-19	106.7	105.5	113.5	113.8	95.3	95.7	95.1	93.5
20-24	83.9	99.0	103.9	103.4	96.4	106.9	91.7	105.0
25-29	119.9	112.3	96.9	98.3	91.4	85.1	102.3	98.5
30-34	86.5	85.2	109.5	106.7	100.1	103.3	94.8	91.6
35-39	109.8	107.4	91.1	94.0	92.4	95.5	90.3	98.3
40-44	79.9	84.4	86.3	86.6	100.2	104.7	107.4	99.5
45-49	131.3	119.3	106.8	107.0	104.7	93.3	91.8	95.8
50-54	77.4	90.0	88.4	86.5	104.1	108.0	121.6	106.2
55-59	112.9	98.4	123.3	121.9	86.4	77.9	71.5	77.9
60-64	92.5	101.8	91.6	92.3	108.0	123.7	144.7	131.0
65-69	109.8	99.2	101.2	101.3	99.8	84.6	72.8	81.2

Age Group	Mozambique 1980		Rwanda 1978		Seychelles 1977		Tanzania 1978	
	M	F	M	F	M	F	M	F
5-9	102.3	108.5	89.8	90.2	99.6	96.6	106.0	106.4
10-14	105.5	92.0	93.5	94.0	103.6	111.5	95.6	90.4
15-19	96.4	90.3	109.4	108.5	111.8	108.7	101.8	98.8
20-24	86.6	106.2	104.9	102.5	94.2	90.7	80.8	93.9
25-29	95.7	94.2	95.8	96.1	94.9	87.3	116.9	112.8
30-34	107.6	106.1	81.8	84.6	88.2	88.4	87.2	87.8
35-39	87.4	92.4	93.5	101.1	100.5	109.9	112.8	104.7
40-44	112.2	109.6	104.0	104.7	98.8	100.3	84.6	91.9
45-49	93.5	88.2	99.3	94.4	104.5	94.3	115.4	106.5
50-54	115.1	115.3	101.6	103.9	100.1	107.4	88.9	97.3
55-59	77.3	73.3	95.5	95.8	98.9	99.8	101.1	85.0
60-64	125.3	135.7	108.1	112.7	93.1	87.5	104.5	120.4
65-69	77.8	76.0	106.6	96.8	112.7	127.9	90.6	87.1

Age Group	Botswana 1981		Lesotho 1976		Swaziland 1986	
	M	F	M	F	M	F
5-9	102.6	101.5	96.0	94.3	100.5	100.7
10-14	100.1	98.3	112.3	108.8	102.6	100.6
15-19	94.1	92.7	94.1	100.0	103.6	96.8
20-24	94.0	106.9	97.7	101.1	86.9	102.1
25-29	100.0	100.8	100.4	94.9	97.3	102.1
30-34	93.8	91.1	91.5	95.3	94.3	89.2
35-39	93.7	93.9	96.4	88.5	103.8	102.6
40-44	102.6	99.8	113.6	123.1	88.3	93.9
45-49	100.5	101.3	93.7	87.8	117.1	107.1
50-54	96.5	93.1	88.2	91.4	94.6	92.3
55-59	101.4	110.3	127.6	119.1	96.1	88.6
60-64	100.6	88.9	88.3	89.9	91.6	99.3
65-69	104.4	111.7	93.4	88.9	98.1	107.0

TABLE A.2: SEX RATIOS IN FIVE-YEAR AGE GROUPS : SELECTED ECA MEMBER STATES ,1970S and 1980s

Western Africa : Sex ratios

Age Group	Benin	Burkina Faso	Cape Verde	Cote d'Ivoire	Gambia	Ghana	Guinea Bissau	Liberia
	1979	1985	1980	1975	1983	1984	1979	1984
0-4	100.1	100.6	95.8	102.5	100.1	100.0	98.0	100.2
5-9	108.7	101.4	98.8	105.7	99.7	102.4	102.3	104.0
10-14	120.3	106.3	97.8	115.3	106.4	106.4	120.7	114.7
15-19	87.3	102.5	96.5	92.8	87.3	104.4	89.8	94.8
20-24	59.8	79.9	74.9	103.2	86.7	84.6	69.1	87.8
25-29	65.1	70.2	60.6	99.4	83.9	84.8	65.3	92.8
30-34	74.9	75.3	63.5	104.5	87.1	89.9	73.5	95.7
35-39	80.2	78.7	56.2	112.7	105.3	93.5	79.4	92.4
40-44	82.9	78.0	59.1	125.3	102.2	91.4	79.4	109.4
45-49	89.3	86.9	68.2	133.2	128.5	103.0	96.2	115.1
50-54	91.0	86.1	75.3	130.6	112.1	96.6	89.3	111.8
55-59	101.3	99.2	81.1	149.5	147.8	101.0	129.0	124.9
60-64	94.0	88.2	80.4	127.2	118.7	91.3	124.3	123.4
65-69	105.6	104.9	83.1	128.7	143.0	94.3	157.3	124.7
70-74	108.1	86.2	84.7	106.2	116.1	98.0	135.0	144.9
75-79	112.5	90.9	(	105.1	126.5	102.6	(	(
80+	109.5	66.8	(57.6	82.0	101.4	92.7	(138.9	(139.6
Total	92.1	92.5	84.8	107.4	99.0	96.5	93.1	102.4

Age Group	Mali	Mauritania	Niger	Senegal	Sierra Leone	Togo
	1976	1977	1977	1976	1974	1981
0-4	99.6	103.5	101.6	100.5	97.1	100.9
5-9	102.0	108.0	110.2	103.9	100.8	107.5
10-14	106.5	113.4	121.8	104.5	115.8	120.4
15-19	92.5	95.4	71.5	93.4	85.5	104.1
20-24	82.2	90.2	69.1	90.5	83.4	71.4
25-29	74.9	85.2	75.7	84.1	86.9	66.7
30-34	82.2	81.2	90.1	83.1	88.6	69.8
35-39	97.2	88.1	125.4	88.5	99.3	75.7
40-44	94.3	90.7	116.0	91.5	104.8	83.5
45-49	113.1	99.0	159.3	106.3	118.2	96.7
50-54	101.0	92.9	124.8	104.4	117.4	97.0
55-59	123.3	96.7	172.9	124.0	123.1	101.5
60-64	94.1	87.9	117.0	112.1	110.8	99.7
65-69	109.4	91.9	151.0	127.4	112.2	103.3
70-74	84.5	72.0	100.7	108.6	113.0	105.9
75-79	(	64.4	124.6	114.4	114.3	104.5
80+	(91.5	48.7	83.4	98.8	100.6	110.4
Total	95.5	96.8	98.3	97.9	98.8	95.1

Eastern and Southern Africa. Sex-ratios

Age	Burundi	Comoros	Djibouti	Kenya	Madagascar	Malaw	Mauritius	Mozambique
Group	1979	1980	1983	1979	1975	1977	1983	1980
0-4	98.6	101.7	107.5	100.0	100.8	95.9	101.8	95.7
5-9	98.9	103.6	108.0	100.2	103.8	98.1	101.6	97.3
10-14	100.1	112.5	111.2	102.6	106.2	106.2	103.1	115.0
15-19	96.8	93.3	106.9	96.2	96.7	93.1	102.0	105.2
20-24	93.3	84.3	113.3	93.5	95.9	76.6	101.6	76.7
25-29	93.9	80.9	107.9	95.0	87.8	87.4	100.1	79.9
30-34	88.4	90.1	95.7	98.2	88.4	90.1	101.4	81.1
35-39	83.8	92.7	97.2	89.2	90.9	90.8	96.9	80.3
40-44	77.5	103.2	110.6	95.5	97.5	86.9	97.3	90.2
45-49	88.6	115.6	122.5	98.6	100.0	92.9	98.6	99.8
50-54	76.4	98.8	109.0	95.8	110.4	81.1	100.7	100.5
55-59	83.0	117.1	123.0	104.6	116.0	96.9	98.7	102.2
60-64	74.9	103.4	99.1	98.3	113.8	89.1	93.5	91.4
65-69	83.1	121.1	107.3	120.0	123.8	100.3	86.6	93.5
70-74	88.6	102.7	82.9	106.1	111.4	93.6	74.3	91.3
75-79	104.0	119.8	89.9	(	115.8	102.4	59.4	89.0
80+	126.3	87.7	72.6	(101.3	97.4	92.9	39.5	97.8
Total	93.5	99.4	107.8	98.5	100.2	93.0	99.1	94.5

Age	Rwanda	Seychelles	Tanzania	Zambia	Zimbabwe	Botswana	Lesotho	Swaziland
Group	1978	1977	1978	1980	1982	1981	1976	1986
0-4	99.1	101.6	96.1	99.1	98.7	100.0	99.2	97.5
5-9	99.0	102.9	98.5	99.7	98.9	99.5	100.4	97.6
10-14	99.8	98.1	103.1	99.9	102.1	96.2	97.8	98.1
15-19	102.0	108.4	95.8	92.3	94.6	86.8	88.3	93.0
20-24	102.9	118.3	79.0	82.1	79.7	71.4	88.2	91.5
25-29	97.0	125.9	86.7	88.7	86.6	73.5	95.9	
30-34	86.0	111.4	90.6	83.6	89.7	78.7	94.5	79.8
35-39	76.9	96.4	98.4	82.9	96.9	81.6	102.2	82.5
40-44	80.0	99.3	92.2	86.6	101.8	86.2	93.8	84.2
45-49	85.3	106.4	102.7	107.5	105.5	86.8	99.0	99.9
50-54	82.5	92.2	98.5	107.3	123.0	89.3	92.3	103.6
55-59	83.1	90.0	117.2	118.5	110.9	85.3	92.2	103.4
60-64	84.6	88.8	98.3	106.1	117.8	98.1	77.9	82.6
65-69	97.9	76.1	107.5	126.6	99.9	88.8	75.6	73.1
70-74	106.0	82.7	113.1	110.9	97.7	89.7	62.1	75.2
75-79	102.4	(	120.9	126.2	(	85.9	53.2	72.6
80+	108.2	(54.5	122.5	102.7	(88.5	64.4	42.6	58.2
Total	95.7	101.4	96.2	95.8	96.0	89.0	93.3	

Middle Africa : Sex-ratios

Age Group	Cameroon 1976	Central African Rep. 1975	Congo 1984	Equ Guinea 1983	Sao Tome Principe 1981
0-4	101.8	98.1	101.0	99.7	103.4
5-9	102.0	105.5	100.2	99.1	104.8
10-14	116.0	115.9	99.1	101.1	104.3
15-19	95.1	91.7	94.8	92.1	99.8
20-24	84.9	84.9	94.8	80.0	98.2
25-29	81.5	76.4	93.5	80.9	92.6
30-34	81.2	85.2	90.6	84.3	89.7
35-39	86.0	76.2	91.7	77.6	88.7
40-44	90.2	85.2	96.4	84.0	103.8
45-49	97.7	84.8	90.3	103.5	102.9
50-54	98.2	93.4	82.1	93.2	95.8
55-59	104.1	98.1	79.6	114.0	94.9
60-64	100.4	112.5	74.1	75.5	94.2
65-69	103.6	106.6	83.0	92.3	92.1
70-74	91.1	(	84.0	85.3	75.9
75-79	98.3	(118.9	80.7	107.0	64.1
80+	97.8	(	71.9	111.6	60.2
Total	95.9	92.1	94.8	92.4	98.9

Northern Africa : Sex ratios

Age Group	Algeria 1977	Egypt 1976	Libya 1973	Morocco 1982	Sudan 1973	Tunisia 1984
0-4	104.2	102.2	102.8	102.9	104.8	105.6
5-9	104.2	94.0	102.5	103.7	107.7	105.2
10-14	105.0	111.1	109.5	105.4	111.9	105.0
15-19	103.2	115.8	110.3	97.0	98.3	103.4
20-24	97.9	97.5	107.7	99.7	82.9	102.7
25-29	101.4	97.0	100.2	102.1	80.2	98.5
30-34	90.9	94.9	108.9	97.4	90.5	99.8
35-39	88.2	99.5	101.2	89.0	105.2	91.8
40-44	92.4	98.8	115.3	82.0	109.0	93.3
45-49	93.1	107.0	113.6	96.8	121.5	95.1
50-54	93.4	96.9	112.6	90.9	113.2	102.3
55-59	96.6	117.0	119.3	112.4	126.4	109.7
60-64	95.4	97.9	104.2	99.3	117.8	112.3
65-69	102.5	110.5	118.9	133.5	131.3	132.6
70-74	109.0	86.2	102.0	91.8	(	128.1
75-79	95.9	(	127.6	(	(	124.7
80+	89.7	(86.2	105.3	(118.9	(115.9	110.5
Total	100.6	103.7	106.4	100.2	102.3	103.4

TABLE A.3

Myers Indexes of Preference Selected ECA Member States
By sex and sub-regions 1960s, 1970s and 1980s

Sub-region/ Country	Census year	Indexes of Preference		
		Total	Male	Female
Northern Africa				
Algeria	1966	-	5.1	9.2
Libya	1973	10.5	7.0	15.3
Morocco	1960	-	33.2	43.7
"	1971	28.4	23.4	33.0
Tunisia	1966	-	5.0	8.6
"	1984	2.3	1.8	3.0
Western Africa				
Benin	1979	19.6	18.2	21.1
Burkina Faso	1975	24.9	23.6	26.2
Gambia	1973	25.0	23.4	26.6
"	1983	24.0	22.1	25.9
Ghana	(1960	-	29.6	31.2
	(1970	-	14.0	16.0
	(1984	15.9	14.0	17.3
Guinea-Bissau	1979	22.3	20.0	22.6
Liberia	(1974	-	27.9	29.6
	(1984	-	20.0	26.8
Mali	1976	20.6	18.0	23.2
Mauritania	1977	18.5	16.4	20.3
Niger	1977	41.1	38.9	43.2
Sao Tome &Principe	1981	2.0	2.2	1.9
Senegal	1976	13.2	11.2	15.2
Sierra Leone	1974	22.4	22.3	24.6
Togo	1970	13.8	13.8	14.0
Middle Africa				
Cameroon	1976	17.4	15.4	19.2
Central African Rep.	1975	13.4	11.1	15.8
Congo	1984	4.6	4.3	4.9
Equatorial Guinea	1983	9.5	6.8	11.9
Eastern Africa				
Burundi	1979	9.0	7.0	11.0
Comoros	1980	25.6	24.7	26.5
Kenya	1979	7.2	6.4	8.1
Madagascar	1974/75	10.0	8.4	11.6
Malawi	1977	7.6	6.6	8.6
Mauritius	1972	2.3	2.0	2.7
	1983	1.1	1.1	1.2
Rwanda	1978	6.1	5.2	7.0

TABLE A.3 (Contd.)

Sub-region/ Country	Census Year	Indexes of Preference		
		Total	Male	Female
Seychelles	1977	0.3	0.4	0.4
Tanzania	1978	15.1	13.2	16.9
Zambia	1969	-	14.8	15.8
	1980	7.3	7.1	7.5
Southern Africa				
Botswana	1971	5.3	5.0	5.3
	1981	3.7	3.7	3.8
Swaziland	1966	-	10.2	8.5
	1976	7.2	7.0	7.4
	1986	5.8	5.6	5.9

Source :

- ECA Population Division
- ECA/RIPS, WorkBook on Demographic Data
- Evaluation and Analysis RAF/87/P05 (Addis Ababa:1989)
- P.O. Ohadike, Determinants of Quality of Age Data: A case Study of the 1974 Liberia Census, RIPS Working Papers, RIPS/WPS/2/87
- T.J.Makannah, "An Evaluation of the Age and Sex Data of the 1963 and 1974 Population Censuses of Sierra Leone", Unpublished manuscript.
- UNECA, "Techniques of Evaluation of Basic Demographic Data", African Population Studies Series No.2, 1975

TABLE A.4 : Patterns of Digital Preference (selected African Countries

Country		0	1	2	3	4	5	6	7	8	9
	M	12.68	9.18	9.91	9.22	9.15	10.77	9.78	8.94	10.26	10.10
Botswana 1981	F	12.35	9.14	10.11	9.39	9.12	10.50	9.79	8.86	10.50	10.25
Burundi	M	14.80	8.34	9.32	8.56	8.92	12.78	8.62	9.36	10.00	9.72
1979	F	17.74	7.46	9.27	8.03	8.51	12.47	7.50	8.42	10.57	9.24
Comoros	M	29.44	4.73	6.46	5.98	6.15	15.29	7.19	7.41	9.65	5.70
1980	F	30.98	4.16	6.10	5.31	5.77	15.55	7.29	7.25	9.66	5.92
Congo	M	10.43	8.83	10.57	7.80	11.81	10.82	10.59	9.34	9.76	10.04
1984	F	10.53	8.53	10.25	7.46	12.63	10.54	10.39	9.12	9.95	10.60
Equatorial Guinea	M	15.24	8.11	9.36	8.90	8.85	11.33	9.23	9.25	10.20	8.52
1983	F	20.24	6.90	8.70	9.13	7.73	11.38	9.03	8.40	10.25	8.14
Gambia	M	24.65	5.41	8.09	6.97	6.29	17.51	7.80	7.24	9.93	6.13
1983	F	27.88	4.85	7.38	5.86	5.82	17.68	7.61	6.71	10.14	5.88
Mauritania	M	21.08	7.73	8.12	6.25	8.34	12.01	13.32	7.02	8.52	7.61
1983	F	24.66	7.09	7.23	5.76	7.29	12.25	13.41	6.92	7.97	7.42
Mauritius	M	10.06	9.77	9.86	9.96	9.56	9.76	10.04	10.11	10.23	10.63
1983	F	10.03	9.69	9.77	10.02	9.50	9.96	9.91	10.17	10.39	10.55
Niger	M	36.27	2.79	6.52	4.24	3.80	22.58	4.55	9.30	6.86	3.08
1977	F	39.93	1.90	5.10	3.13	3.19	23.32	4.37	9.35	7.04	2.67
Rwanda	M	11.10	9.06	9.79	9.96	9.63	8.97	10.71	7.89	13.38	9.52
1978	F	11.75	8.63	9.69	10.17	9.38	8.81	10.38	7.43	14.67	9.05
Sao Tome and Principe	M	9.34	11.38	10.13	9.95	9.39	9.31	10.22	10.05	10.37	9.85
1981	F	9.51	11.09	9.92	9.41	9.93	9.55	10.60	10.24	9.99	9.78
Swaziland	M	12.11	8.39	10.12	8.49	9.62	11.30	10.65	8.66	11.46	9.20
1986	F	12.76	8.46	10.32	8.71	9.45	11.08	10.03	8.28	11.66	9.25

(Contd.)

Country		Digital Preference 0	1	2	3	4	5	6	7	8	9
Tanzania	M	15.90	6.35	9.65	7.36	8.40	14.36	9.49	7.81	12.92	7.75
1978	F	18.92	5.83	9.61	6.83	7.92	14.60	8.63	6.83	13.36	7.48
Tunisie	M	10.17	10.02	9.42	10.42	10.29	9.79	9.46	9.73	9.85	10.86
1984	F	10.05	9.65	8.85	10.75	10.65	9.80	9.20	9.53	10.00	11.49
Zambia	M	13.46	8.58	11.10	8.68	9.05	10.36	10.39	8.00	11.83	8.55
1980	F	14.21	8.70	11.29	8.52	9.26	10.06	10.14	7.65	11.80	8.36
Ghana	M	17.67	6.09	10.71	6.80	8.75	14.98	9.37	7.71	11.04	6.88
1984	F	20.15	5.69	10.49	6.48	8.29	15.20	9.29	6.66	11.51	6.25
Burkina	M	17.04	7.47	8.76	8.62	6.84	15.67	8.21	10.84	8.37	8.19
Faso1975	F	20.86	6.83	8.32	7.66	6.03	16.86	7.25	10.50	7.78	7.92

TABLE A.5: Myers Index of Preference : Urban and Rural Areas of Selected African Countries

Country	Census Year	Division	Myers index of Preference Total
Benin	1979	Urban	16.2
		Rural	22.1
Central African Republic	1975	Urban	9.8
		Rural	15.4
Liberia	1974	Urban	11.6
		Rural	15.8
Libya	1973	Urban	8.0
		Rural	14.0
Mali	1976	Urban	12.0
		Rural	22.8
Rwanda	1978	Urban	5.0
		Rural	6.4
Zambia	1974	Urban	5.7
		Rural	7.8

Source : M. Bailey, "Patterns of Digit Preference and Avoidance in the Age Statistics of some Recent African Censuses, 1970 - 1982", unpublished manuscript.

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Addis-Ababa, Ethiopia, 15 - 20 January 1990

Agenda item 22

EVALUATION OF EXPERIENCES OF ECA MEMBER STATES IN THE IMPLEMENTATION OF THE RECOMMENDATIONS OF THE KILIMANJARO PROGRAMME OF ACTION.

I. INTRODUCTION

1. The main population problems of the ECA member states are their rapid growth rates, the underlying high fertility and the uneven spatial distribution. These should be perceived against the background of the social and economic crisis of the region, charaterized by the worst economic situation in recent history with drought and abnormally low commodity prices, poor economic management and a benign neglect of rural development.

2. The second African Population Conference (Jan. 1984) reviewed the progress made by the ECA member states in the implementation of the recommendations of the World population plan of action (WPPA) adopted in Bucharest (1974) as well as at the Regional Consultation held in Lusaka (1975) and adopted the Kilimanjaro programme of Action (KPA) with a total of 84 recommendations addressed to the member states and covering nine broad areas including population and development (Rec. 1-16); fertility and family planning (Rec. 17-30); morbidity and mortality (ec. 31-39); urbanization and migration (Rec. 40-46); changing role of women in the development process (Rec. 47-58), children and youth (Rec. 59-65); population data collection, analysis, training and research (Rec. 66-77); population information (Rec. 78-81); and, community involvement (Rec. 82-84).

3. A summary of these recommendations was presented to PSD.4 (1986). Additionally, the ECA

3. A summary of these recommendations was presented to PSD.4 (1986). Additionally, the ECA Executive Secretary was called upon to ensure that the principles, objectives and recommendations of the KPA were incorporated in the work programme of the Secretariat. At PSD.5 (1988), it was reported that about 16 of these states had formulated explicit population policies within the framework of their development plans consistent with the KPA recommendations. In addition, at PSD. 5, 'Guidelines for integrating population variables in the development planning process' prepared by the ECA secretariat was presented (UNECA,1988); it highlighted four main activities for such integration at the macro level. The first activity relates to the definition of the conceptual framework for the integration process and involves a study of the population-development interrelationships using the national data. This step is crucial because the implications of the established relationships should constitute the basis of the demographic objectives to be included in the development plan. The policies and programmes of the development plan should then be designed in pursuance of such objectives. The data, research and socio-economic models required for this important step in the integration process were highlighted in the 'Guidelines'. The establishment of the institutional framework required to implement these activities constitutes the second set of activities involved in the integration process. A third set of activities relates to the training needed to provide the manpower to operationalize the integration process. The final set of activities relates to the dissemination of population information required and generated by the integration process.

4. The 'Guidelines' further stresed that for each planning cycle, each Sectoral Ministry should assess the main problems (in relation to population) that hinder the realization of its development objectives. As at the macro level, appropriate data, research and models should be used in this regard. An analysis of the implications of the population development interrelationship so determined, should form the basis of the demographic objectives to be pursued per sector in the course of a particular development plan. Sectoral policies and programmes should then be developed in pursuance of the sectoral objectives. In order to ensure that population variables are considered endogenously in the development process, a unit within the planning machinery should coordinate these sectoral problem areas, development objectives and policies/programmes. The country's comprehensive national population programme (CNPP) should derive from these macro and sectoral levels of activities. In effect, a CNPP should normally comprise component sectors each consisting of projects/activities grouped around a related sub-set of the population policy objectives, targets and strategies (Morah,1988). It is important to ensure that the CNPP derives from the input of specialists in other sectors; that linkages between the

different sector programmes are established; and ,that inconsistences between sector programmes are streamlined.

5. The CNPP thus provides a guide to the preparation of the regional programmes. The latter are particularly necessary for very diverse countries with substantial socio-economic regional disparities and with marked cultural differentials as well as a government desire to respond to the specific needs, peculiarities and stages of development per region. Invariably the component sectors of any CNPP are a function of the comprehensiveness of the population policy itself and the prevailing conventional wisdom which is to serve as 'modus operandi' in the formulation of the population policy. For instance, the member states that developed population policies following the WPPA (1974), KPA and International Conference on Population (ICP ,1984) modelled their policy objectives, targets and strategies around the recommendations of these milestones in population policy development. In particular, the CNPPs developed following the KPA have encompassed the nine main areas of the KPA.

6. As a preparatory work for this 6th session of the Joint Conference, the ECA Secretariat undertook missions to selected member states (Cameroun, Ghana, Swaziland, Uganda, Zambia) in order to derive their implementation of the KPA recommendations from observed experiences. The CNPPs of these 5 member states are being discussed in the present report using the 'Guidelines' and the KPA as analytical frameworks. Additionally, the evidence for all the 5 member states indicates that UNFPA has provided most of the funding for the various population related projects. In the course of monitoring their implementation, the fund has organized some review and/or 'ongoing'/ 'expost' evaluation of these projects. Where such information is available, the material will be used as well (United Nations, 1986).

7. Thus this paper has the dual objectives of (i) ascertaining the extent, if any, to which the five member states have implemented the KPA recommendations, within the general framework of the 'Guidelines' developed by UNECA (1988) for integrating population factors in the development planning process; and (ii) evolving some 'modus operandi' for guiding the member states in their future implementation of the KPA recommendations. In section II an overview of the perceptions and policies by the 26 ECA member states that responded to the UN sixth population inquiry (1987) as at 31st December,1988 is presented; the objective is to provide a general picture of the regional situation with respect to population policy development at least since PSD.5. In Sections III through VII , the CNPPs for the five member states visited are outlined based on information obtained during the mission to each of them. Section VIII synthesizes the overall presentation.

II. SUMMARY OVERVIEW OF THE REGIONAL SITUATION ON POPULATION POLICY

DEVELOPMENT BASED ON THE UN SIXTH POPULATION INQUIRY (INQ6)

- Population growth policies

8. At about the time of the Third World Population Conference in Bucharest (1974), many ECA member state governments considered their population size as rather small and expressed a desire for a larger population (UNECA,1974). Such an attitude could be explained by the desire for a larger labour force to develop their natural resources as well as to expand their domestic markets; by low population densities; and, by the then prevailing notion of international respect and prestige. Based on the outcome of INQ6 (1987), the attitude of ECA these states favouring a larger population size is reported to have changed and a much smaller population size seems to be currently preferred. Only five of the responding states (ie. Burundi,G. Bissau,Liberia, Mauritius and Uganda) or 20 per cent expressed satisfaction with their present population size. Of the 11 that were not satisfied,only one (ie Somalia) considered its population size as rather small while 10 (ie. Algeria, C. Verde, Comoros,Egypt, Ethiopia,Gambia,Kenya, S.Leone,Tunisia,and Zimbabwe) considered it as large. About 9 states (ie. B.Faso, Cameroun, Madagascar, Malawi, Mauritania, Senegal, Swaziland, U.R.Tanzania, and Zambia) had no official position. The responses to the question of government's view concerning their projected population by the year 2025 further testify to the trend in favour of a smaller population size. Furthermore, none of the respondents perceived its population growth rate as low; only two states perceived it as satisfactory; 5 had no official position; and, 18 (ie. 69 per cent) perceived it as rather high. In otherwords, the responses of these states at INQ6 reinforce an increasing perception of population growth as high. The shifting in the perception of population growth rates in the region as assessed between INQ5 (1982) and INQ6 (1987) is a reflection of the impact of the KPA.

9. An issue of concern is the gap between the level of these perceptions and the action taken by these states to formulate policies to influence their population growth rate. If a member state has evidence to the effect that its population growth rate is thwarting its development efforts, then it is only logical that it should take steps to deal with the population growth rate. But if the needed data, trained personnel and a workable methodology are not available,then the state's failure to formulate a policy may bear little relevance (if any) to its perception of the phenomenon. It is possible that the observed lag between the member states' perceptions of their population growth and their formulation of policies

as reflected by the outcome of INQ6 is indeed a reflection of these constraints. Among the states with a policy to lower existing rate of population growth are Algeria, Botswana, Burundi,Cape Verde,Comoros,Egypt,Gambia,Ghana, G.Bissau,Kenya,Liberia, Lesotho,Mauritius,Seychelles and Zambia. Some of these policies have been on-going for about two decades (eg Ghana) but their impact relative to the set objectives remains low.

- Fertility policies

10. Assessments of observed rates of population change and consequent policies to influence such rates have been largely focussed on their fertility components. Based on INQ6, only one state (Mauritius) perceived its fertility level as satisfactory; none perceived it as low; and, 21 perceived it as high. As for population growth, these results reflect the fact that following the adoption of the KPA in 1984, a much higher proportion of the member states perceived their fertility level as high. Regarding policies, about 34 states did not formulate policy to contain their fertility levels because they perceived the existing levels as satisfactory. Only three (Chad,Congo and Eq. Guinea) had a policy to raise their fertility levels. A total of 14 states are reported to have formulated a policy aimed at reducing their levels and only 3 (Burkina Faso, Mauritius and Morocco) had a policy to maintain the level.

11. One impediment to the effective design and execution of fertility policies in the ECA member states is the fact that their formulation and implementation have often taken place without adequate understanding of the socio-economic situation. The socio-economic milieu relevant to the design of effective fertility policy is the family or more specifically,women. Fertility policies should be targeted to women and should be based upon an understanding of the role of women both within the family and the larger framework of society. Of course the policies should also take men into account. There is also the lack of a sound information base. A third impediment is the short term interest of policy makers who want to obtain immediate results from policy interventions although demographic events take a long time to unfold. A fourth impediment arises when a population policy reflects the ideas of a politically elite or articulate group;there are bound to be gaps between individual desires and the pursuit of the collective good. A classic example of an ineffective fertility policy is Kenya despite at least two decades of implementing the set strategies.

- Spatial distribution policies

12. In the face of the ineffectiveness of most fertility policies in the region, population growth rates have remained at their high levels inspite of a few successful attempts to reduce them. These high rates of

population growth generate rural population surpl... that cannot be absorbed in rural areas, at least und... current conditions of agricultural technology and social organization. Consequently, migration rates have also been high particularly to the urban areas of these states wi... very low urbanization levels.

13. Based on INQ6, 17 states had adopted a poli... purporting to modify their population distribution. In ... per cent of such cases, the objective was to change the population distribution between rural and urban places; in 71 per cent of the cases, it was to achieve a bett... balance between population and local resources; and, in about 41 per cent of the cases, it was to change the population distribution between the regions. These responses do not seem to indicate a particular policy preference pertaining to popula tion distribution among the states. And yet, relative to population growth and fertility, the governments perceived population distribution as the most serious constraint of their development efforts. A pertinent question to raise here is why the biggest gap between perception and action is the case of population distribution. One possible explanation is that, unlike population growth and fertility, it is quite difficult for a government to take action purporting to move a population from where it has psychological and cultural attachment; another possible reason is property ownership.

14. Based on an earlier study (UNECA, 1983), policies designed to affect the movement of groups of people in the region include land colonization and settlement, farm resettlement, sedentarization of nomads and the establishment of new towns. Examples of land colonization are the Mwea and Machakos schemes in Kenya; the Mokwa and Shendam schemes in Nigeria; and, the Gezira scheme in the Sudan. A classic example of a settlement scheme is the Ujamaa village scheme in the U.R.Tanzania. Resettlement schemes have largely resulted from construction of large dams creating extensive man-made lakes such as the Aswan in Egypt, the Volta in Ghana, and the Kainji in Nigeria. Considerable numbers of nomads and semi-nomads are found in the Sudan, Somalia, Mauritania, the Niger, Chad, Mali, the U.R.Tanzania and Nigeria. Programmes of resettling them have been vigourously pursued in these states. Examples of new town policy include the port of Tema in Ghana, mining towns such as those in Zambia, Zaire and Mauritania, and new capitals such as Abuja in Nigeria. Available evidence indicates that the objectives of most of these policies have been largely unattained.

- Migration policies

15. In general, member states perceive both dimensions of international migration within their geographical boundaries as satisfactory. Accordingly, most of them have policies to maintain their existing levels

of both immigration and emigration. About 14 of the responding states (INQ6) had no official position on immigration and 17 in the case of emigration. Only two of these member states had a policy to contain their immigration level and 8 , in the case of emigration. Egypt and Tunisia had a policy to increase their emigration level; Burkina Faso,Cameroun, G.Bissau,Uganda and Zimbabwe had a policy to reduce their emigration level; and, Kenya,Liberia and Mauritius had a policy to maintain their emigration level. Overall, emigration is perceived as a more serious problem than immigration by these states. Accordingly,more of them also took action to contain their emigration level relative to immigration. One dimension of this emigration is the brain drain phenomenon. Eighteen states (Burundi, Cameroun, Comoros, Ethiopia, Egypt, Kenya, Liberia, Madagascar, Malawi, Morocco,G.Bissau,Sierra Leone, Somalia, Swaziland, U.R.Tanzania, Uganda, Zambia and Zimbabwe) indicate that the brain drain was a major concern to their governments. Of these, only Cameroun, Ethiopia, Kenya, Malawi, Morocco, Sierra Leone, Uganda and Zambia had taken steps to contain the problem.

III. THE CASE OF CAMEROUN

16. Prior to 1984, population activities in Cameroun embraced mostly data collection and analysis (the 1976 census; the 1978 fertility survey; the 1982 consumer survey; and,the 1987 census). Following the conduct of the 1976 census and the dissemination of its results, it became clear that demographic pressures constrained the government from meeting the growing needs of the population especially those of mothers and children; the level and patterns of rural exodus, urbanization, and rural unemployment also militated against development efforts. Despite these problems, the government had no explicit population policy. Rather,the prevailing official attitude during the 1970s was that the population should reach at least 10 million before any concern should be expressed about slowing down its growth rate. Indeed based on the results of the 5th monitoring report of the UN (1987) to which Cameroun responded, although the government perceived its population growth rate as high and its fertility level as satis factory, it had no explicit policy to contain both traits. Even at INQ6 ,the situation had not changed.

17. This official pro-natalist attitude was reflected in various incentives given by the government to large families thrcugh marriage laws as well as family and leave allowances. Additionally, although the use of contraceptives was then illegal, a small family planning clinic was operat[illegible] in the public sector simultaneous with the sale of contraceptives in private pharmacies. Against the strong background of Islam and Catholicism, these pro-natalist traits implied that the chances of any major change in the official stance on contraception seemed remote at the time. Accordingly,on

government request, UNFPA undertook a mission in 1979 to assess the needs and priorities for population assistance. The mission identified 6 main priority areas that required assistance viz (UNFPA, September,1980) :

- the reactivation of the National population Commission (NPC);

- the need to complement the census (1976) data by a spectrum of post-census surveys;

- the need to create a Population Planning Unit (PPU);

- the need to (a) give priority to a management study of the programmes in Ministry of Health (MOH) to ensure that the latter are in line with the principles of development planning ; (b) assist the Ministry of education (MOE) to include in the curriculum the teaching of subjects like population dynamics,migration ;rural exodus; and, (c) assist the Ministry of Youths and Sports in reactivating the campaign on functional and selective literacy;

- the establishment of a Unit for Social Statistics in the Ministry of Social [illegible] assess the problems faced by women; and,

- the creation of a centrally located communications Unit to help meet all requirements of communication support to population programmes.

18. In the light of these needs and the subsequent progamming mission, UNFPA in addition to the 1976 census, funded (i) assistance in improving MCH services project; (ii) review and compilation of population related laws project; (iii) family welfare education for members of cooperatives project; and, (iv) family health progamme project; Besides UNFPA, Cameroun also received major population related assistance from (i) FAO/UNDP on consequences of urban development on nutrition; (ii) a five-year programme (1981-86) funded by France and Italy to provide health personnel and volunteers for health education; and, (iii) Canadian/American assistance in rural well construction/water and sanitation education programmes.

19. The first UNFPA country programme for Cameroun was characterized by three main activities :

- identification of an orientation for population policy;

- the creation of needed organizational structure for policy development; and,

- population - development interrelationship studies.

A PPU was established in the Ministry of Planning and Territorial Management as the technical secretariat of the National Commission on Population and prerequisite for institutionalizing the formulation and implementation of a population policy. Sectoral research on population and development was undertaken by the PPU in collaboration with different Ministries; and, a national seminar was organized (September, 1985). Two other UNFPA funded projects that were implemented during the 1984-87 period - a national seminar in 1984 and a population education project for responsible parenthood and family welfare in 1985.

20. Following the reactivation of the NPC , the government defined its priorities for population assistance within its sixth 5-year development plan. On this basis, the second UNFPA country programme (1987-90) incorporates projects in the six main areas of (i) MCH/FP; (ii) IEC; (iii) basic data collection and analysis; (iv) population policy formulation; (v) women and development; and, (vi) monitoring and evaluation. In the course of the current programme, the PPU will constitute an Inter-disciplinary Group comprising six Task Forces in the areas of (i) population and development; (ii) health/ mortality/ nutrition; (iii) employment/ economic activity/ natural resources; (iv) education and youth; (v) urbanization/ migration/ housing. Based on the analysis of the reports from these task forces, the country's population profile will be prepared alongside with its implications for development. Deriving from these implications, the goals, objectives and targets of a draft population policy will be prepared.

21. It is thus clear that Cameroun has come a long way from being pronatalist to being anti-natalist at least following the adoption of the KPA in 1984. The CNPPs as reflected by the two UNFPA country programmes do not cover all the nine areas of the KPA recommendations (eg. urbanization and migration; spatial distribution; children and youth; and, community involvement) presumably because the identified population problems to date do not as yet impinch on these other areas.

IV. THE CASE OF GHANA

22. In 1969 Ghana became the third subsaharan African country after Mauritius (1958) and Kenya (1965) to promulgate a population policy. The policy was aimed primarily at reducing the country's rate of natural increase thereby stimulating the growth of per capita income directly through the creation of a family planning programme; and, indirectly through such schemes as education; manpower development/employ ment; health; population redistribution; decentralization; food and nutrition; laws/regulations affecting fertility; etc. However, twenty years after, the policy objectives are yet to be achieved. The annual population growth rate only

declined from 3.0% to 2.1% during the 1969-84 period as against a policy target rate of 1.7% by the turn of the century.

23. Several factors had been identified as accounting for the rather modest impact of the policy. Although all the governments, since the promulgation of the policy, had accepted its tenets, none of them had the adequate politi commitment needed for successful implementation and none also incorporated population variables into the national development plans. The lack of adequate knowledge about population issues simultaneous with the non appreciation of the consequences of rapid population growth among the country's policy makers, planners and the general public also hindered policy implementation. Other con include poor institutional coordination (the limited number of trained personnel, insufficient institutional support and inadequate government funding) ; the fact that delivery of almost all family planning services depended on an already over-burdened health system; the concentration of the programme services in urban areas; the concentration on adult women to the exclusion of men and adolescents; the non incorporation of local communities and specia groups in programme implementation; and, inadequate research/evaluation.

24. Perhaps the most important constraint was the undue emphasis in the policy on family planning at the expense of the indicated non-family planning programmes. The decade was that of family planning and accordingly, funding was available. The apparent institutionalization of the family planning programme together with the destibilization of national manpower planning programme largely explain the poor impact of the policy. Two ministries (Finance and Economic Planning) used to coordinate manpower planning. But following the disintegration of the two and the deployment of staff to solve other ad hoc problems , the result was that there had been no development plan since the one covering the period 1975/76-1979/80; the negative impact of the policy implementation is readily obvious.

24. Over the years concern has been growing about the low impact of the policy. In 1984 the UNFPA undertook a population needs assesment mission to the country and subsequently set up an office in 1985 to coordinate the various population programmes. Since then many activities aimed at revitalizing the policy implementation have been undertaken. Among these is the provision of family planning services within the nation-wide PHC programme. The social marketing programme advertizes and delivers contraceptives and oral rehydration salts through a country-wide network. The NGOs have also intensified the provision of family planning services. In the area of IEC, a project funded by USAID aims at increasing family planning awareness in the country. In April 1986 a national conference on population and national reconstruction was held; it

focussed attention on the population policy. The Population Impact Project (PIP) was subsequently established at the University of Ghana as an outreach programme to maintain and accelerate the interest and momentum created by the conference.

25. In reviewing the 20 years experience of implementing the policy, Benneh and others (1989) have suggested 8 actions for achieving the objectives of the policy. Among these are the expansion of the policy focuss beyond family planning; increasing government awareness at all levels; identifying institutions responsible for policy implementation; providing more trained personnel; increasing accessibility of contraceptives; educating the public about implications of rapid population growth; addressing related socio-economic problems and, incresing research and data collection. Consistent with these and other considera- tions, the UNFPA, beginning in 1988 has to date funded a total of eight projects within the framework of the country's CNPP. These include (i) assistance to Ghanaian National Council on women and development (GNCWD) - to enhance, support (ii) assistance to population and family life IEC activities - (iii) strengthening population policy and its implementation; iv) use of population variables in modifying agricultural production targets and policy decisions; (v) strengthening national MCH/FP; (vi) introducing population communications in Ghana Institute of Journalism ; (vii) strengthenning the capacity of the 31st December Women Movement for population education communication and incom generating activities; and, (viii) streghtening the capacity for demographic analysis and dissemination of demographic data.

26. The most recent effort at revitalizing the policy implementation is the national population conference held in June 1989 to critically examine the achievements and short comings of the policy implementation and make concrete suggestions for the future. The conference adopted two sets of recommendations. In general, it was agreed that (i) there must be increased and sustained commitment at the highest levels of government to both the tenets and implementation of the policy; (ii) the policy should be placed at the core of all development planning activities; (iii) adequate financial resources should be provided by government for implementing the policy strategies; (iv) government should adopt legislative,administrative and organizational policies to assist the implementation of the policy; (v) legislative,administrative and organizational arrangements should be established to address such problem areas as deforestation,soil erosion and desertification. Additionally, there were specific recommendations in such areas as policy implementation; MCH/FP; non-family planning components; gender issue; data collection/monitoring/ research/evaluation; IEC; and, population and law.

27. A national planning commission is to be established with five divisions. One of these would be the Social Policy Division to ensure comprehensive planning of the social sector and the much needed intersectoral linkages for the provision of guidelines for effective integration of population variables in the country's development planning at the macro/sectoral/regional levels. The plan is to enact a national planning commission law to ensure that all planning be guided by the law.

V. THE CASE OF SWAZILAND

28. Despite the apparent considerable experience with development planning, population has not been explicitly considered as an endogenous variable in the country's development process. A chapter on health was included in the fourth development plan to provide services that contribute towards an increase in child spacing and a moderation in the rate of population growth. However, a number of population-responsive programmes have been promoted which indicate increased government awareness of and concern about the relevance of population factors in the country's development planning process. Such programmes focussed on rural development to reduce rural urban migration; expansion of educational opportunities; and, promotion of labour intensive projects to offer employment to school leavers.

29. In 1980, the UNFPA undertook a mission to identify needs and priority areas for population assistance. At the time, there was accute shortage of nationals with adequate skills to collect, process, analyse and utilize demographic data in the planning process. Accordingly, the main thrust of the mission's recommendations was the need to strenghthen the country's institutional base for implementing its population programmes. In this context, the Demographic and Social Statistics Unit in the CSO needed to be strenghthened; the Central Statistical Office(CSO) University of Swaziland (UNS) needed to organize regular in-service training programmes for statistical staff; and, a Demographic Training and Research Center needed to be established at the UNS. Other recommendations included (i) the creation of awareness among government officials of the population -development interrelationships; (ii) the continuation of assistance to the family planning programme; (iii) the promotion of IEC; and, (iv) efforts at enhancing the status and role of Swazi women. In the specific area of facilitating an integrated approach to development planning, the mission recommended the revitalization of the rural development committee ; expanding the scope of the Interministerial Committee for rural development; and, establishment of the NPC within the Prime Minister's Office to coordinate planning and programme implementation in various ministries.

30. Subsequent to the mission, UNFPA's assistance included reorganizing/expanding a nation-wide civil registration/vital statistics system; conducting (and analysing) the 1986 census; establishing demographic training within the national university; undertaking a study on law and population; promoting family life IEC Services; strengthening the national MCH/FP programme;and; initiating a project on women/population/development. The civil registration/vital statistics system project was aimed at obtaining the vital data required for estimating the country's population growth rate simultaneous with updating demographic and other socio-economic data for use in development planning. The objective of the census project was to provide up-to-date demographic and related socio-economic data for use in integrating population in development planning. The training project at the University was aimed, inter alia, at improving the manpower requirement for population policy development. The law project was to enhance awareness of the relationship between local laws and population policies/ programmes. Equally the IEC project was to enhance national awareness of the inter-relationship of family size, child spacing and family/community welfare. The latter project Concerning the MCH/FP project, the aim was to improve delivery of MCH/FP services as part of the national health care system. Besides UNFPA, assistance in the area of population was also provided to the government on an ad hoc basis by several donor agencies including the IPPF, UNICEF, USAID and WHO. The UNICEF's project focussed on expanded immunization, diarrhoeal disease control, nutrition/growth monitoring, etc; the USAID projects included a PHC Survey; control of water-borne/ childhood communicable diseases; and supply of contraceptives. The WHO projects provided grants and technical expertize to support health planning exercises, research on population related subjects, training in public health and family planning, etc.

31. All these and other projects have failed to foster population policy development in the country largely due to the Swazi laws and customs; the size-able dominance of Catholics within the christian community; and the feeling that it is no use formulating an explicit policy that may not be implemented due to these other considerations. From the discussions with various policy makers and planners, it would appear that the apparent skepticism about prospects for developing a population policy for the country represents the more traditional stance within the government structure. The more modern position which is quite optimistic contends that there exist a general government commitment at the highest level to formulate and implement a population policy to contain the very high rapid population growth rate. This view is predicated on the successful completion of two workshops earlier in 1989 for Parliamentarians and Principal Secretaries respectively purtorting to sensitize these cadre of policy makers

about population development interelationship. Specically, the workshop for Parliamentarians (19-22 June,1988) was aimed at providing information to members of Parliament on the effects of rapid population growth on national development and thus to (i) enable the legislators make informed decisions; and, (ii) form a Parliamentary Committee to deal with issues on population and development. The Symposium for the Principal Secretaries , besides sensitizing this cadre of government officials about the impact of the rapid population growth rate so that urgent steps can be taken towards a solution, was also aimed at enabling them to discuss the Declaration and Resolutions that were made by the MPs for implementation.

32. Indeed the Ministry of Health had in the course of 1988 and 1989 conducted a Family Health Survey to meet the needs expressed by the PHC project for statistically valid assessment of the general reproductive and MCH conditions of families in the country. The Survey provided information on (i) fertility and infant-child mortality; (ii) MCH/FP; (iii) communicable diseases; (iv) behaviour and risks (v) attitudes towards reproduction; and (vi) health service utilization. The results generally confirmed the findings from the 1986 population census. To a large extent, therefore, there exist reasonable data/information needed for the formulation of a population policy. Additionally, the envisaged 10 year prospective plan will accord priority to education, basic health services and agriculture. The government has adopted a PHC approach as the major health strategy and has emphasized health education programme to inform and educate the public on how to achieve better health and the availability of health services.

33. Given these and other considerations, the UNFPA's first country (1988-91) programme would seek to enhance the capacity of the Department of Economic Planning and Statistics, as the central coordinating office of the government, to coordinate the activities of the various projects in order to highlight the multi-sectoral nature of population and enable optimum utlization of available resources. The planned projects of the the country's first CNPP include (i) strengthening of national MCH/FP services; (ii) family life IEC services in the non-formal sector; (iii) in-depth analysis of census and civil registration data; (iv) training in demography; (v) integration of population factors into national planning (vi) women, population and development; and, (vii) monitoring, evaluation and management. The choice of these projects derives from lessons learnt from previous UNFPA supported projects findings of technical backstopping and evaluation missions; recommendations of a 1980 basic needs assessment report; the proposed programmes of other donor agencies; and, the UNFPA current strategy for sub Saharan Africa.

VI. THE CASE OF UGANDA

34. All the development plans in Uganda during the 1970s emphasized an improvement in health and living standards as well as the achievement of an egalitarian income distribution. But the political instability of the period coupled with a war during 1979-80 hindered the realization of these objectives. The UNFPA undertook a needs assessment mission in 1980. However, the destruction of government infrastructure by the war also hindered the capacity of the mission to define needs in all fields. Accordingly, in 1982 a second mission was undertaken to update the findings of the earlier mission. Together both missions recommended (i) the establishment of a Population and development Council within the Ministry of Planning and Economic Development (MPED) to oversee and coordinate the sectoral formulation and implementation of population and development policies; (ii) regular/periodic censuses/surveys/continuos vital registration with appropriate technical base for analysis, interpretation and dissemination of data for planning purposes; (iii) the coordination of sectoral research by the joint efforts of the MPED and the National Research Council (NRC) ; (iv) the creation of a national health planning council within the MOH jointly by the MOH, Makerere University and External aid agencies; (v) the establishment of a comprehensive IEC system; and, (vi) research on women's contribution and factors that hinder/promote women's role in development.

35. Despite these two needs assessment missions it was not possible to develop projects that could be constituted into a CNPP for Uganda until about 1986. A total of 10 projects have since then been developed. These include (i) the 1990 population and housing Census Project; (ii) Development of popalation reserach and training programme at Makerere Univeristy; (iii) District MCH/FP service delivery programme; (iv) Population policy and development planning; (v) Integrated district population programme; (vi) Population and family life education; in Ugandan formal education system; (vii) Integration of family life education, education and communication services into mass media programmes; (viii) Integration of population education in the Department of agricultural extension; (ix) Integration of population education in women's community action programmes; and, (x) Population and family welfare education for workers. 36. Of the 10 projects, only four (ie. (i), (ii), (iv) and (v)) have a national coverage; the remaining six are designed to cover the 4 selected pilot districts. When fully implemented, these projects would constitute the CNPP for would strenghthen the government's capability with development planning. However, there are a few problems. Virtually all the project documents were prepared during the 1986-87 period when the security situation in the country was such that all the needed information for preparing realistic and operationally feasible projects were in most cases not available. By

implication the project documents neither reflected existing conditions accurately nor anticipated any possible changing financial requirements. Besides the implementation of the planned activities for most of the projects has lagged behind by as much as 12 to 15 months due partly to the late arrival of the advisors; the scarcity and non appointment of national counterparts; the lack of office accomodation; and, governments inability to provide its counterpart funding, to mention a few.

VII. THE CASE OF ZAMBIA

37. Based on the five published UN monitoring reports (1977- 1987), Zambia has all along perceived as generally satisfactory, its population growth rate, fertility, immigration and emigration levels. The spatial distribution of its population was however all along perceived as inappropriate and requiring major changes (UNECA, 1989). Indeed the governments position on population was for many years pro- natal. During the first decade of independence (1964-74), planning was promoted primarily to improve the health status of mothers and their children. After 1975, a more neutral position to population emerged. In the course of the second decade (1975-85), it became obvious to the government that population factors were constraining the realization of its socio-economic development objectives.

38. The government established an MCH/FP unit in the Ministry of Health in 1969; in 1978, it adopted a strategy for the development of PHC in order to achieve the goal of health for all by the year 2000. Under the MCH/FP project, the government trained about 800 nurses/midwives and health staff in programme equiped about 600 health units; and, supplied various contraceptives. One of the impacts of these activities was an increase in the acceptance rate of family planning from three to eight per cent over the 8 year period (1979-87); another was the enhancement of local knowledge and skills in MCH/FP service delivery/management. However, overall project performance remained inadequate at the end of the project due primarily to poor management of programme; weak family planning IEC activities; lack of logistical support; and, poor baseline data on service delivery.

39. During its first population programme of assistance (1979-82), the UNFPA supported the governments national health programme. This was expanded to incorporate the first country programme (1984-87) which enabled the government to (i) establish a family health unit in the Ministry of Health and integrate MCH/FP services into the normal health care delivery system; (ii) introduce comprehensive population and family life IEC programmes into both formal and non-formal sectors; (iii) conduct in-depth analysis of the 1980 population

census data and disseminate the results; (iv) develop a national capability in the planning and coordination of population programmes; and, (v) introduce a demographic training programme in the University of Zambia.

40. The objective of integration of population education into courses of the Presidents citizenship college remains unfulfilled. The major weaknesses of the project are the absence of training and educational materials; the inadequate provision of staff resources; and, the inability to respond to the evident demand for family planning services at factory level. The objective of the project regarding analysis of the 1980 census data was to complete processing activities and analyze the data from the 1980 national population census. In-depth analytical reports were published and used to develop analyses of the impact of levels and trends of population variables on the Zambian economy; the dissemination of the results has enhanced public awareness of population issues. It has also generated related socio-economic data which can be used in sectoral and national planning. The project on demographic training was developed in order to create a national cadre with expertize in demography and related fields at various levels and lead ultimately to the establishment of Department of Demography and Statistics at the UNZA to cater for national needs in demographic statistical training and research.

41. The population and development planning project was aimed at creating awareness and assisting the government in its efforts to integrate population into national development planning. The PDPU was established in 1985 as a Unit in the human resources planning department. Its activities were to be executed through the National Commission for Development Planning (NCDP) and the Technical Committee on Population (ITCP). The PDPU was to (i) coordinate and monitor population policy implementation and related activities in sectoral ministries, institutions and the proposed provincial district population councils, (ii) foster closer linkage between NCDP, sectoral ministries and the CSO in integrating population and related human resource issues into the national development planning and plan implementation processes; (iii) promote and organize awareness creation and training activities; (iv) stimulate and coordinate research on population and human resources issues; and, (v) serve as the secretariat of the National Population Council.

42. The objectives of the project on family life education included (i) incorporating educational programmes and family planning services into existing workplaces and occupational/medical services ; and, (ii) gaining active involvement of the employers and the unions which allows for effective communication channels to circulate population/family welfare messages. According to Valdivia and Friedman (1986), the project achieved the

goal of enhancing awareness of the impact of family life behaviour on members' socio-economic status. The main progress achieved results from the visibility of the programme among crucial policy-making sectors in Zambia (the government; the trade unions; the employers; and, the party). This led to the process of population policy formulation which was launched on 17th May 1989. The first country programme has thus helped to establish the institutional framework for the country's population policy formulation and implementation.

43. A draft population policy was prepared in 1985 but due to the tedium of the process followed, the policy was only launched by the Head of State in his address to the National Conference on Zambian population policy on 17th May, 1989. Many national seminars/conferences were organized for the Party and religious leaders as well as National and Provincial Council members and others in order to establish a concensus on the country's population concerns and their interrelationships with socio-economic development. The overall goal of the policy is to accelerate the national development e and impreove the standard of living for all Zambians. The specific objectives are to initiate, improve and sustain measures to reduce the high population growth rate; enhance the health/welfare among high risk mothers/children; achieve a more even distribution of the population; maintain/expand the population data base; and, promote fundamental human right simultaneous with providing IEC on number/spacing of children.

44. Regarding the institutional framework for implementing the policy, there already exist (i) the Population development and planning unit (PDPU) located at the National Commission for Population and Development (NCPD); the Family welfare education unit (FWEU); in school population education unit; population communication unit; family health unit; Planned Parenthood Association of Zambia, Fam,ily life movement. Additionally, provision has been made within the fourth national development plan (1989-93) to establish two units relating to the integration of population education in the women's unit at the NCPD and the Ministry of Agriculture and Cooperatives respectively. The Bank of Credit and Commerce International Foundation for new and emerging sciences and technologies has established a population resource center for mobilization of resources to facilitate the implementation of the various population programmes and activities. A population council is also to be established to advise government and coordinate the various population activities. With these developments, the government has deliberately and systematically integrated population factors in its national development planning.

45. The second UNFPA country programme for Zambia (1988 - 92) was developed in cognizance of (i) lessons

learnt from the first country programme; (ii) the governments' then proposed national population policy; (iii) the interim national development plan (July 1987 - Dec. 1988); (iv) all the recommendations of the 1981 basic needs assessment report as well as the UNFPA programme development mission and UNFPA technical evaluation mission (both in 1986); (v) the proposed programmes of other Donor Agencies (eg. UNDP, UNICEF, and USAID); and, (vi) the UNFPA new strategy of assistance to sub-Saharan Africa. Overall, the objectives of the second country programme are to consolidate the achievements made under the first country programme and to firmly integrate population concerns into the national planning machinery and attain self-sufficiency in the design, implementation and coordination of the national population policy and programme. The programme was also aimed at giving continued support to ongoing projects and process on the development of human resources; improving the country's institutional support system; and, strengthening inter- sectoral coordination. There was however a modification of emphasis relative to the first programme. The main thrust of the second programme was on the MCH/FP (36%) followed by population IEC (21 %); basic data collection (14 %); formulation and evaluation of the population policy and programme (11%); women, population and development (9%); population dynamics (7%); and, programme reserve (2%).

46. In appraising the Zambian CNPP, two observations are pertinent. First, of all the 9 major areas of the KPA, the programme places emphasis on population and development; fertility and family planning; mortality and morbidity; changing role of women in the development process; data collection, training and research; and population information. Three areas (children and youth; urbanization; and, involvement) are not explicitly addressed by the programme. However and implicitly, during the Third Development plan launched in 1979, the government undertook the promotion of regional growth centers to reduce the rural to urban migration trends and to involve local people in social and economic planning/ implementation to strengthen the then existing rural settlement schemes. Secondly, by emphasing the integration of a family planning programme within its socio-economic development planning process, the Zambian population programme definitely has a built-in potential to address the country's problems of poverty, unemployement and income inequality.

VIII. AN OVERVIEW AND SYNTHESIS

47. A summary of the regional situation regarding population policy development as well as the constituents of a CNPP in 5 ECA member states were presented in the preceding sections. Two of these five states - Ghana and Zambia have a national population policy with a formal policy document containing some versions of their population profiles and their implications; the policy

goals, objectives and targets; the policy measures/strategies; institutional framework for their implementation; and, some provisions for monitoring, co-ordinating and evaluating the implementation process. Despite variations, the general indication is that a Population Planning Unit (PPU) is usually set up within the national Ministry of Planning and charged with the task of co-ordinating the process of formulating the policy. The PPU then constitutes task forces to analyse the available demographic data, compose the population profile and compile the policy goals, objectives, targets, measures etc. The policy draft is then subjected to extensive debate all over the country to ensure acceptability before being formally promulgated by the Head of State. The PPU should, among other things, provide the Sectoral Ministries with the 'know-how' for integrating population factors in the analysis of their sector problems per planning cycle. The development objectives of the sector should derive from the identified problem areas. The policies and programmes should be formulated in pursuance of the objectives. Operationally, the PPU should liase with the appropriate unit in the planning machinery responsible for coordinating the sectoral objectives/policies to ensure effective integration.

48. These steps can also be used with modifications as guide for the other Member States that are yet to formulate their population policy. The fact of formulating the policy within the framework of the development plan does not however necessarily imply that the principles outlined in the " Guidelines for integrating population for planning " as presented to ISD.5 were strictly adhered to. There will always be deviations. Nonetheless, the 1980-90 decade can be regarded as one during which the 'know-how' for population policy formulation was fully well placed under control within most member states in the region. In terms of pertinent, recent and/or available documentation at the regional level, there are (i) the proceedings of the Regional Workshop on demographic estimates and projections held at Addis Ababa, May 1988, ECA), volumes I and II ; (ii) 'Guidelines for integrating population variables in the development plans of ECA member states' presented to PSD.5 in March,1988; (iii) the status and prospects of population policies in ECA member states' published in African population studies Series No. 10 (December, 1989); and, (iv) the series of these monitoring reports of the implementation of the KPA recommendations. This report urges member states that are yet to formulate their population policies to use the principles in these documents as a 'modus operandi'.

49. With respect to the implementation of the policy strategies, none of the two member states (visited) with an explicit population policy (ie. Ghana and Zambia) has clearly worked out the modalities for the implementation in accordance with the 'Guidelines'. It is suggested in the

said 'Guidelines' that a starting point in such modalities should be the establishment of a multi-sectoral committee for the implementation of the policy strategies. The latter should then constitute a task force per policy strategy to review the state of knowledge in the country per such area; identify the problems that might have constrained the realization of the objectives of past projects per strategy area; and, spell out an operational action plan, with a budget, for implementing the suggested measures. The reports of the various task forces should constitute background papers to be discussed at an 'Action Plan Workshop' for implementing the policy strategies. Following the workshop, the revised version of the background documents should be used to derive a strategy for implementing the policy. This is part of the "modus operandi" proposed by the present report for fostering the process of population policy development in the region. Needed documentation on the implementation aspects of population policy development in the region (comparable to the formulation aspect) is yet to be compiled.

50. In terms of achievements, two sets of long term objectives have so far been identified concerning population policy development efforts in the region - formulation/ implementation of population policy and institutionalization of the PPU. The first of these, a function of political will, has been largely achieved in Nigeria, Rwanda and Cameroun. The allocation of a chapter in the development plan to population, though indicative of progress relative to the 1960-70 decade, is not full-fledged integration. Cameroun is a real evidence of integration where population variables were taken into account in a number of sectors (employment, education and housing) in the national plan. Another indication of achievement is the considerable degree of success in promoting awareness and contributing to the national population debate (ex. Cameroun, Mali, Nigeria, Rwanda and Sierra Leone). Constraints to further success in this regard include inadequate data, insufficient methodologies, lack of adequate national counterpart staffing, shortcomings in technical backstopping and the current economic crisis in the region. Efforts should be directed by both the member states and the international community at minimising and/or eliminating these constraints in order to consolidate the gains made to date in population policy development in the region.

51. Beyond these considerations, the outline of the comprehensive national population programmes (CNPP) for the 5 member states have indicated specific projects that are funded by UNFPA. Although these projects can be subsumed under some of the nine areas of the KIA recommendations, two issues emerge that are pertinent in terms of the future development of population policies in the region. First, it is important that the development of the national projects is not 'institutionalized. Rather, the projects should be developed within the

framework of the CNPP. As stressed above the latter should be developed within the framework of the Guidelines for integrating population in the planning process. Secondly, and related to the first, since the projects mostly contain a technical assistance component, there is a need for each member state to define a norm for such assistance in order to ensure effective utilization of such aid. The existing situation in many of the states whereby the various technical assistance is not co-ordinated has a built-in potential for duplication of effort, time and resources and could be counter productive.

52. Both of these issues are particularly relevant in this context because the components of the CNPPs in these states or simply the actual or proposed measures/strategies for implementing the population policy tend to focus on family planning and fertility regulation, MCH, IEC, women and development; rural development; and, data collection/training/research. The review of the CNPP in the five member states has revealed that the other areas emphasized in the KPA namely children and youth and community involvement have not been equally highlighted. This assumes that rural development programmes are intended to address spatial distribution, migration and urbanization aspects of the population programme. But often, as this report has also revealed, even the aspects emphasized in the CNPPs, do not receive as much emphasis as the family planning component. The point being stressed here is that much as family planning programme, when combined with socio economic development programmes is consistent with existing conventional wisdom in terms of providing a panacea for addressing the problem of poverty, unemployment and inequality, the non family planning components of the CNPP should be implemented as a multi-dimensional and an integral part of the national population policy. This implies that they should be developed within a co-ordinated and systematic framework of inter-sectoral programming which should cover, among others, education, rural development, housing, manpower, health, employment/income generation, migration, agriculture, nutrition, concerns of the environment, the aged, the role of women in development and the problems posed by the deadly disease AIDS.

53. In particular, as recommended by the National Population Conference held in Ghana in June, 1989, the CNPP should promote family life education with emphasis on population dynamics. Equally, functional literacy should be vigorously pursued within the framework of the health care and family planning programmes. There is also a need for the CNPP to incorporate a national housing policy to respond both to the increasing housing demand and the spatial aspects of population distribution. A comprehensive manpower survey should be undertaken periodically to take stock of existing manpower needs and shortfalls in the formal and non-formal sectors within a decentralized planning framework. The policy of

integrated rural development should be supported with adequate financial resources. The CNPP should incorporate a National Food Security Plan formulated and promulgated on a scientific basis to ensure continuous and adequate food supply for the people. To the extent that law plays an important role in the formulation and implementation of population policies, the CNPP should also provide for constant review and amendment of the laws on such aspects like education act, abortion law, workmen's compensation law, etc. so as to reflect current changes in the socio-economic, cultural and demographic structures of the states.

54. Overall, this report has indicated that the various member states in the region are at varying stages of popula tion policy development. It is also clear that a major strategy in the CNPPs of these states is the MCH/FP programmes; and, UNFPA has provided the bulk of funding for both of these activities. It is pertinent at this point to examine some of the lessons from an evaluation of both programmes (ie. population policy development and MCH/FP) in order to provide some additional 'modus operandi' for those member states at much earlier stages in their population policy development.

55. Concerning the MCH/FP programme, four projects executed by WHO in Botswana, Malawi, Swaziland and Zambia were evaluated during the 1981-84 period (ie. before the adoption of the KPA) in Southern Africa by UNFPA. Many more such projects have been evaluated since the adoption of the KPA. According to UNFPA (Dec. 1984), the operational problems identified in the four projects have been found in similar projects within the region. The evaluation of the four MCH/FP projects focussed on five of such problems including (i) training of medical personnel in family planning; (ii) management/administration ; (iii) research and evaluation; (iv) project monitoring; and, (v) WHO execution. In each of the four projects recommend ations have been made. Some of these recommendations are highlighted here as a guide to future programming of MCH/FP projects in the region.

56. On training, since the main MCH/FP service provider is the Nurse/Midwife, it has been recommended that national institutions, UNFPA and other donor agencies should establish a Master of Public Health level course with family planning and management specializations. In particular,family planning should be incorporated into both pre and in-service training curricula of all medical personnel. Supervision and supply/distribution of contraceptives are important components in the management/administration of family planning programmes. In the area of supervision, some of the identified problems include lack of trained staff, limited transport, and unclear definitions of the supervisory function. Accordingly, it has been recommended that regional/subregional workshops should be organized to

strenghthen national capacity in such supervision and management. A supervisor's manual based on national experiences within the region should be produced. Among the administrative problems also identified are bottlenecks in determining contraceptive requirements, ordering/delivering and storage/distribution of contraceptives. In this regard, it is recommended that advisory services (international) should assist the MOH in planning for contraceptive needs and establishing the logistical systems required for the ordering, storage and distribution of contraceptives to the service delivery points.

57. Limited attention is often paid in MCH/FP projects to the socio-cultural setting of the target populations; evaluation research aspects have also been noticed as deficient due in part to inadequacy of existing service statistics, underutilization of reliable data, lack of tech nical assistance, to mention a few. In order to provide the MOH with options for improving project performance, it has been recommended that existing data should be analysed and operational research undertaken on programme acceptability, family planning methods, service delivery strategies and supervision/supply/distribution of essential commodities for the MCH/FP projects. The findings of such socio-cultural research should be used in developing strategies for family planning service delivery for various target groups and the development of IEC strategies.

58. Regarding population policy development in the region, the projects have been largely executed by ILO and DTCD. Often, these projects involve the establishment of a PPU within the Ministry of Planning or Health to integrate population factors in development planning. Available evidence from the UN population inquiries to date indicates that about 60 % of the ECA member states have set up such units. About nine of these projects (Cameroun, Ethiopia,Mali, Nigeria, Rwanda, Senegal, Sierra Leone, Switzerland and Zimbabwe) were evaluated by ILO in January-February, 1988 with respect to the population and development issues which they seek to address namely needs assessment; project design and strategies; institutional framework; knowledge base; methodologies and practices of integration; achievements; role of agencies; monitoring-evaluation; and, role of women (Lucas et al, 1988).

59. With respect to basic needs assessment exercise, the evaluation noted that the population development field had not been adequately treated. If integration of population factors into planning is to be successful in the region, it must address the critical population development interrela tionships that are of concern to governments of the ECA member states. These include population and food production; population and health; population and settlement patterns; population and education; population and environment;

population and energy; population , labour force and employment/poverty; and, population and women. There is, therefore ,the need to restructure UNFPA's format of basic needs assessment missions.

60. On project design/strategies, the evaluation noted that in the Project documents (PRODOCs), the formulation of projects was rather ambitious and unrealistic while inadequate provisions were made for implementation. Equally, the PRODUCs neither considered the link between programmed tasks and existing institutional framework nor did they adequately conceptualize the relationship between the project and the member state's main population development issues. Accordingly a pre-project phase has been suggested during which time the PPU is expected to be permanently integrated within the national administra tive structure (in terms of appointing permanent staff and providing suitable institutional framework) ; this should be the short term objective of the project. The institutional location of the PPU, its insertion into the governmental structure, the prestige/authority of those in charge of population policy and adequate staffing should provide indications of government corricern to a genuine population policy during this phase.

61. In this context, this report has also revealed that the National Population Commissions set up in some of the member states, rather than perform the role of coordinating the integration process at the macro/sectoral levels of planning, invariably introduce additional bureaucratic constraints that tend to militate against effective integration of population factors in planning. To and as implicit in the 'Guidelines', for effective integration, the NPC should serve as the linchpin for coordinating population policy development. Ideally, the NPC should be a high level political body chaired by a senior member of the Cabinet and should have a genuine political mandate to set policy guidelines which would have concrete impact on operational population programmes. Its activities should be backed up at the technical and administrative levels by the PPU: it should report, at least once a year, on the state of the country's population. Specifically, it should provide a forum where matters on population management for the nation can be discussed and joint decisions taken on programme activity regarding overall guidance, consistency, coordination, monitoring, evaluation and implementation of the population policy. Where these parameters are well taken care of, the PPU's role then should be to provide technical, analytical and research expertize in support of population policy formulation and integration of population variables into development planning. In this context, the cases of Mali and Rwanda are examples of reasonably well implemented projects. But if not (eg. Senegal), then project activities will be impaired.

62. On data base, the 110 evaluation under reference

has noted that recent census/survey data, when properly analysed on time are important inputs in reinforcing the knowledge base needed for population develop ment, analysis, policy formulation and integration of popula tion factors into planning. Further UNFPA support for data collection and compilation was therefore suggested by the mission. Additionally, in order to enhance an understanding of the nature, direction and intensity of the interrelationships between popu lation variables and socio-economic variables, five analytical methods have been suggested (Lucas et al, 1988). These include socio-economic demographic interaction analysis; projections; macro-economic models; sectoral planning; and micro level analysis/local level planning. Based on the experiences of Sierra Leone, Mali and Rwanda, it has been recommended that there is need for further work in the area of integration as well as UNFPA's continued support to modelling efforts.

population assistance to Cameroun, Ghana, Swaziland, Uganda and Zambia.

Valdivia,L.A. and Friedman,M., Evaluation of the UNFPA funded project on labour and family welfare education in organized sector in Zambia (UNFPA: Lusaka,Sept./Oct.,1986).